

Blockchain technology and the role of blockchain in uzbekistan

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Annotation: This article gives you a brief overview on blockchain technology and its benefits. There is talk about the development of blockchain in Uzbekistan and in what areas the blockchain can be widely used.

Keywords: Digital economy, blockchain, bitcoin, transaction.

Blockchain is a database that is distributed between the nodes of a computer network. As a database, blockchain stores data in digital format in electronic form. Blockchains are known for their decisive role in cryptocurrency systems such as Bitcoin to store secure and non-centered recording of transactions. The innovation in Blockchain is that it guarantees the reliability and security of the data record.

One of the main differences between a simple database and blockchain is the structure of the data. Blockchain collects information in groups known as blocks that store the data set. The blocks have certain storage capabilities and close when filled, connect with a previously filled block and form a data chain known as a "blockchain." All new data after the newly added block will be collected into the newly formed block and added to the chain after replenishing.

Blokcheynning printsiipi va ishlashi

Blockchain is a chain of blocks where the history of transactions can be maintained, as well as a tool by which transactions go from one person to another. This is a distributed book, which everyone can access, and also offers an irreversible feature for cryptocurrency. Now let's find out how it works. Each block contains data and hash of the previous block. A data set stores user data, and information similar to quantity. The hash then becomes more like a unique identification number, such as a fingerprint. Once the block is created, it is a hash, and if something changes on the block, the hash code will also change. It defines the block and all its composition. The hash of the front block is stored on the next block forming a chain, making its blocking safe. The current block refers to the previous block's hash, so if the hash of one block changes, it will affect the next block.

Blockchain uses work proof technology, slows down the creation of new blocks in the case of bitcoin, it can take 10 minutes to calculate proof of the case and creation of new blocks. This mechanism makes hardening very difficult, since if one block is more temperature-free, we must confirm the work of all the blocks. Blockchain is also very safe due to the peer-to-peer feature, if someone joins the network, it will receive a full knowledge of the blockchain and can check if everything is in order. Let's take a look at what happens when someone creates a new block. When someone creates a new block, it will be sent to everyone in the block chain. They check to see if they have been approved and broken and then add that block to the chain. Nodes on the network create consensus and they agree on which blocks are not valid, and unbreakable blocks are rejected and only real blocks are added to the blockchain. To access blockchain, each block must be broken properly, and 50% of peers must agree to add the block to their blockchain.

Features of blockchain

1. **Reliable** – Blockchain is reliable because it uses a peer-to-peer network, as everyone can access the transaction history and get acquainted with the transaction details and with whom the transaction is

being done. It also includes hash functionality that is very safe, and no one can modify it using any algorithm.

2. Distributed - Blockchain is a distributed system, there is no supervising body where every node can get information about the transaction being processed. Only centers within a centralized system will have access to the transaction, and if any node is not working on the distributed system, it will not affect other nodes and other nodes will be connected.
3. Hash Technology - Hash Feature is the most important technology of blockchain, a feature that makes blockchain technology very safe because if each block has a hash of the previous block, and something changes on the block, it does not correspond to the hash of the next block. . So, here it is possible to reduce the risk of demolition.
4. Secure- Blockchain is very safe and cannot be easily broken. Since change blocks are added, when someone tries to break down a block, he has to block every block next to the block, and the added blocks can't stand the speed.
5. Transaction fee - in a centralized system, a certain amount of transaction fee is charged by banks when performing this transaction, but in blocking technology this is canceled.

Blockchain is the basis for cryptography. In the case of Bitcoin, blockchain is used decentralized, so no individual or group will have control, but rather all users will collectively retain control. Decentralized blockchains are unchanged, i.e. the entered data cannot be returned. For Bitcoin, this means transactions are recorded on a regular basis and made visible to everyone. Bitcoin technology was introduced by Satoshi Nakamoto, which has a decentralized, peer-to-peer and electronic cash system based on the RPOW principle, but bitcoin used a peer-to-peer platform to derail centralization, instead of using a reliable computer system. Ethereum is also based on blockchain technology, an alternative cryptocurrency.

The capabilities of the digital economy and blockchain technologies in Uzbekistan are extremely promising. [The Resolution](#) of the Head of State of the Republic of Uzbekistan dated September 2, 2018, launched the free work of companies in the field of crypto-assets and blockchain technologies.

The Digital Trust Foundation has been established to implement the most promising and strategically important projects for the development of the digital economy, as well as other measures to prepare personnel in the field of the development and implementation of blockchain technologies.

On November 12, for the first time in Uzbekistan, a pilot project of blockchain technology was introduced in the system of automated reestablishments of the State Center for The Expertise and Standardization of Medicines, Medical Equipment and Medical Equipment. So the data of this object is from any manipulation. Many focus on blockchain technology as the basis for the transaction of cryptocurrencies. However, its capacity is higher than financial transactions. Here are some interesting yet not widely circulated [information about](#) this revolutionary technology.

1. Blockchain can be used to track the results of scientific research

According to Scientific American magazine, 2.5 million scientific papers are published annually. Often, checking the results to the authors can be a challenge. Blockchain may come to the aid in this situation. Scientific American writes:

"Blockchain significantly simplifies and speeds up the publication and validation of data – it will not be possible to alter or falsify the results of the experiments."

2. Blockchain technology market to reach \$60 billion by 2024

In 2017, the market for blockchain-based technologies would total \$ 708 million. According to forecasts, by 2024, their total amount will be \$60.7 billion. The bulk of such growth is directed to the financial services market.

3. Some technop companies are already earning from the sale of blockchain

Graphic cards offered by American companies NVIDIA and AMD (Advanced Micro Devices) allow you to develop cryptocurrencies and work with blockchain.

NVIDIA chief Juan Jensen recently told CNBC that technology is moving into a radically new form and it will remain with us for a long time

4. Blockchain media increases transparency in the market

Salon Media Group is using a blockchain technology-based registry to record contracts and related payments for advertising. Unilever Corporation, in turn, uses IBM's blockchain technology to purchase advertising spaces in the United States and track its transactions.

5. Power supply network can be controlled with technology

Blockchain allows you to modernize the correlation between electricity consumers and its suppliers. Data is automatically stored in a single register.

6. Blockchain can radically change the transport industry

Control over thousands of cargo ships around the world is a serious problem for companies. Blockchain can simplify this process by converting the circulation of documents into electronic form. Bloomberg's recent article says that the standardization of container sizes in the 1960s made a revolution in the industry. If blockchain makes logistics simpler than it really is, goods around the world will get cheaper.

7. Technology can be used to manage radio frequents

Currently, there is a limited frequency range for commercial radio stations in the United States. Some of its networks are used for generic cellular communications, others are designed for government organizations to use, and third for technologies like WiFi. Blockchain allows you to control radio frequents and distribute diaphragms depending on the size of the requirements.

8. Works on Digital Passports Blockchain

Billions of people around the world struggle to confirm their identity (with documentation). Microsoft wants to change that. The company is currently developing a decentralized digital identification system. The system gives everyone a unique number. It can be used when using banking services, in healthcare and even traveling the world.

The abstract. We need to implement a number of measures for the development of blockchain in our country. For example, in the field of medicine, we can get rid of a lot of costs by tying disease sheets to the blockchain. It also provides accurate information that can be exchanged if we use it in the field of taxation, cadastre services, and education .

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