

BLOCKCHAIN TECHNOLOGIES IN THE MODERN ECONOMY

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The article deals with the concept of blocking. The essence and significance of the block system is determined. The possibilities of the prospects for implementing the blockade system in everyday life are examined and studied. The locking system is considered and described schematically. Examples of the use of new technology for the use of a block system are given. The advantages and disadvantages of the global information structure are considered.

The 21st century is the century of discoveries and information technologies. IT scope is included in those industries that have never used hi-tech factor as a determinant one. Indeed, we are talking about progress and a park of high technologies. All people use the Internet, the welfare of leading in capitalization companies would be impossible without this network. With the advent of revolutionary innovations, work with the help of computer technology has proved to be significantly more effective. It comes out that progress can't exist without a computer and the Internet in our days. However, artificial intelligence is a subject for hacking so security is one of the most important factors that is preventing the creation of digital economies around the world at this time. The trust of the customer base, the guarantee for doing business, the efficiency of accounting and data storage, effective insurance activity - all of this depends on the level of security and trust of the clientele.

It starts with the fact that since 2009 the whole world has seen the appearance of the payment system which is called Bitcoin [6]. Hence the appearance of the payment instrument which is called Bitcoin-Cash. The fact is that this payment system is based on the technology of "Blockchain", or "The Chain of Blocks".

The Blockchain is a huge public database [2]. The main difference from other databases is that there are no intermediaries between the participants of the system. The database includes transactions that range from remittances to contracts. The essence of the work is that the system is the safest in the world. Literally, the essence of security lies in two words "Block" and "Chain" - the chain of blocks. The block is the main component of the system which stores data on all the transactions performed. Each block has its own hash-code.

For example, two entrepreneurs carry out a transaction for the amount of 9 450 BYN. The transaction data is entered the block. The block consists of several components [1], which you can observe in Table 1.

Table 1 – The composition of block in the Blockchain

Data	Balance	NONCE	HASH
9450	9750	150	1000

Table 1 shows how the Block works. Let's analyze step by step. The scheme of working can be observed in picture below.

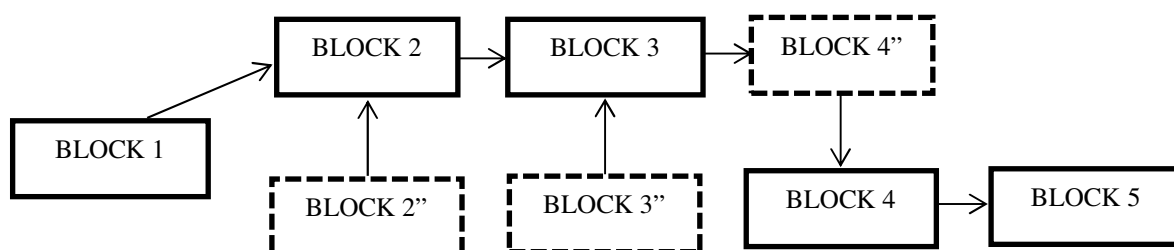


Fig. 1. The chain of block

Source: own development of the author.

So, the transaction data has been entered. Each Block works by function. Balance is a sort of function (any) that makes up a certain value which is equivalent to the data. NONCE is something you need to add to the

data to get the HASH-code. HASH-code is a value specified by the security of the database which makes the system count. Once the HASH code is found then a new block is created. The new block includes both old data and new data that will be entered into the system. The new block has its own HASH which varies to an unlimited number of zeros. And the values are huge. After that a new block is created and together they are creating a new chain. Calculations are conducted by "miners" - participants of the system, they form the security of database. The faster the participant counts the nonce to the hash-code the faster the new block will be created in which the data from the old blocks is unchanged and authentic. By organizing the security of the system the "miners" receive an economic benefit in the form of obtaining a crypto currency, or digital currency, which is equivalent to the real money.

Having drawn a conclusion, it can be easily understood that the Blockchain's technology is really effective and can be implemented in any accounting system of our country. Since 2015 the Ethereum platform has appeared which makes it possible to build a block system.

Practically, measures on introduction and development of the given system in our country are undertaken. Let's consider the Resolution of the Board of the National Bank of the Republic of Belarus No. 280 dated July 14, 2017, which defines the operation instructions for the network of transaction blocks in our country, and also formed the Council which is a collegial body that determines the standards for the functioning of the Blockchain including the procedure of connecting new owners of certifying nodes of the information network, connection of applied tasks, technical requirements, tariffing of services and other regulatory norms [3].

The decree of the President of the Republic of Belarus called "About the development of the digital economy" No. 8 of December 27, 2017 is a confirmation of the creation of a "digital" economy in the Republic of Belarus. The main provisions of the Decree were:

To create the conditions for the implementing the technology of blocks into the economy of the Republic of Belarus, along with other technologies based on the principles of distribution, decentralization and security of operations performed with their use [4].

This point says that the Blockchain is officially recognized by the state and that this technology will begin to be introduced into the economy of our country.

According to the author's opinion, the Ethereum system is the most promising. There are many arguments for its effective work. The 1st one is the creation of earnings for people-miners. The miners receive economic benefits by ensuring the security of the system and its operation. If to look broadly, this activity needs expensive devices which, possibly, will attract borrowers to the banking and credit sphere and it will enrich technological producers. So, we can observe that the Blockchain has a redistributive function.

The appearance of a new form of business, namely, organizations that specialize in mining provide a place and conditions for effective operation of the devices. The essence of such companies is to take a percentage from the miners who work on their base.

With the advent of this technology, creativity becomes to be a very important business. Any unknown person who engages in creativity wants to sell his work, but he can't do this in real life without an intermediary. The lack of advertising, influence and other social factors will not allow a creative person to earn money; we are talking about a large number of people in different spheres of creativity. However, with the help of the Ethereum system, the person can make a code-condition in its block in the form of a set of prices to combine creativity with earnings, and what is the most important is that it takes no intermediaries to do that.

As the author has already mentioned above this system is the most accessible by the fact that there are no intermediaries in it. Let's take the usual money transfer. To send it you need:

1. To contact the organization that provides this service.
2. Pay the interest.
3. Wait for some time until your colleague received it.

With the help of this system you can send money without intermediaries, just set a certain condition in the system, for example, do not enter data about the transaction into the system until the person receives this money. At the same time, all processes take place virtually it turns out to be the most mobile and cheap fund transfer. The last example in this article is about the plans of the Republic of Belarus in the sphere of the chain of blocks. The government is already planning to implement a block system to account the shared construction contracts [5].

This will increase the confidence of citizens and increase the flow of funds into the construction. The attraction of investments is the function which is laid by the state in this regard. Replacement of paper archives which are subject to the influence of external factors of nature. The invariable and reliable storage of contracts in the blocks of the chain. Further, the system, according to the author's opinion, will expand and will be

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adopted for keeping records of owners of apartments, cars and other benefits. The technology can be coordinated with the work of the Ministries, Markets, State Organizations. It will make the system accounting fully automated.

In the author's opinion, the Blockchain system is the future in the sphere of both economic and any other. Accounting registers can be transferred to this technology which will increase the stability of accounting in general. While we can say about the initial spread of this technology, but in the nearest future this technology will gain momentum.

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