

ІНФОРМАЦІЙНІ ТЕХНОЛОГІЇ

Vladyslav Akhmatov, Liudmyla Roienko
(Kyiv)

HISTORY AND MODERNITY OF CRYPTOCURRENCIES

У статті досліджуються особливості та передумови виникнення криптовалют у світовій економіці. Досліджується історія виникнення криптовалют, їх типи. З'ясовуються особливості функціонування біткоїна та інших криптовалют та сфери їх вжитку.

Ключові слова: криптовалюта, біткоїн, історія виникнення криптовалют, переваги криптовалют, сфери вжитку криптовалют.

Key words: *cryptocurrency, Bitcoin, the history of cryptocurrency appearing, the advantages of cryptocurrencies, the spheres of cryptocurrencies' usage.*

Nowadays, because of the spread of IT technologies and general computerization, we see how the financial systems of individual countries are improving and progressing. Thanks to this, new financial instruments appear, one of them is Bitcoin. The prerequisites for creating cryptocurrencies appeared 10 years before the creation of the most popular cryptocurrency. Neil Towne Stevenson described the advantages of creating an uncontrolled cryptocurrency in his novel.

The aim of the given research is to study the history of cryptocurrencies formation, their main peculiar features, the spheres of their use, their strong and weak sides.

Until 2005 the researcher Nix Szabo worked on the creation of an electronic money system Bit Gold. He claimed that the virtual currency will not be subject to inflation, in addition, it will not be possible to fake or steal it. The date of birth of bitcoin was 2009, in January of that year, the bitcoin app was launched. During this period, Bitcoin was known only to a small group of developers and early users. Growth in popularity of bitcoin began to gain after the opening of the forum bitcoin.org. The initial money block in this system was generated by bitcoin creator Satoshi Nakamoto. A few days later, the first operation was performed to transfer the bitcoin cryptocurrency from one user's account to another. A natural question arises: how much did Bitcoin cost when it appeared and where did these currency units come from? It turns out that Bitcoin was generated by users on computers. At the end of 2009, the Bitcoin exchange rate ranged from 700-1600 units for one dollar. It was published on the resource New Liberty Standard. His calculation scheme was primitive. The average computer processor power was taken as the basis, multiplied by the price of electricity in the United States and divided by the number of bitcoins generated by the creator of the site. In August 2010, a serious vulnerability was discovered in the Bitcoin protocol. Verifying transactions before writing them to the blockchain was a weak point in the network. This made it possible for hackers to steal more than 184 billion bitcoins. Within a few hours, the vulnerability was fixed, and hacker transactions were deleted. This was the only vulnerability of this scale in the entire history of bitcoin [3, c. 15].

In late 2010, Satoshi Nakamoto left the project. Bitcoin development was continued by other community members. The year 2011 was marked by the appearance of the Mt. Gox became the first platform on which it was possible to exchange bitcoin for ordinary money. In 2012, scientists, financiers, and programmers actively joined the Bitcoin community. This helped to increase the number of applications that would work with the Bitcoin network. Light browser wallets began to appear, which simplified the work with cryptocurrency. In 2013, many new cryptocurrencies appeared, they could not become direct competitors to bitcoin, but they could become popular. In 2010, the cost of Bitcoin was \$ 0.5. The first deal was made - the purchase of pizza for 10,000 Bitcoins. And already in 2017, the cost of one Bitcoin exceeded \$ 20,000.

Today, there are a large number of cryptocurrencies. The most popular of them are Bitcoin, Ethereum, XRP, Bitcoin Cash, Litecoin, Stellar, Cardano, IOTA, NEO, Monero. Such currencies can be bought through exchange brokers or through mining. The meaning of mining is to install

special software on a user's computer. With its help, some mathematical tasks are solved, as a result, bitcoins are created. The ability to pay with bitcoins appears every day. Already today, with the help of cryptocurrency, you can pay for goods on eBay, Microsoft, KFC, Shopify, Subway, and many others. [2] You can buy clothes, furniture, appliances, in some countries you can even pay for university tuition. You can pay for training in Germany, USA, Cyprus, Switzerland. Lucerne University of Switzerland accepts cryptocurrency through BitcoinSuisse. Bitcoin is accepted as payment in many restaurants and hotels around the world. Some people get paid in cryptocurrency. Every day there are new companies that introduce the ability to pay using digital currency. Payment can be made using a transfer to the specified wallet or via a separate payment system. Payment can be made by transferring to a specified wallet or through a separate payment system. The payment option via QR code is also possible. Since the end of 2018, in the state of Ohio in the USA, it is possible to pay tax in digital currency. As in other post-Soviet countries, Bitcoin has not yet been widely used in Ukraine, but it is used very actively in the Internet sphere. Ukraine is among the top 10 countries in the number of bitcoin wallets due to IT specialists who actively invest in this currency.

The new payment system based on cryptography helps to achieve security, anonymity, and decentralization of virtual currency. The main advantages of this type of currency: the lack of an emission centres, control, and restriction of output, complete anonymity, the ability to generate currency, protection against inflation, etc. It is possible that in the future, cryptocurrencies will be able to replace such large payment operators as MasterCard and Visa. But even considering all the advantages of bitcoin, its prospects are ambiguous. Some countries introduce its circulation at the legal level, while others prohibit their use.

REFERENCES

1. Демченко Д. Україна входить в топ-10 стран по количеству пользователей криптовалют. URL: <https://ain.ua/2018/05/25/ukraina-v-top-10-po-polzovatelyam-kriptovalyut/>
2. Криптовалюты в реальном времени. URL: <https://ru.investing.com/crypto/>
3. Vigna P., Casey M. The Age of Cryptocurrency: How Bitcoin and Digital Money Are Challenging the Global Economic Order / Vigna P, Casey. M. St. Martin's Press, 2015. 368 p.

УДК 004.9

Viktoriiia Bereza, Kseniia Kugai
(Kyiv)

VIDEO GAME DEVELOPMENT AS A BRANCH OF INFORMATION TECHNOLOGY

Стаття присвячена відеоіграм як галузі інформаційних технологій. Проаналізовано процес розвитку, історія виникнення та розвиток, їх вплив на сучасний світ і місце в культурі.

Ключові слова: відеогра, розробка, індустрія, розробник відеоігор.

The article deals with video games as a branch of information technology. The process of development, the history of an origin and progress, their impact on the modern world and place in culture are analyzed.

Key words: videogame, development, industry, videogame designer.

Game development is an art of creating games. It describes the design, development and release of a game. It may involve concept generation, design, development, test and release. While you create a game, it is important to think about the game mechanics, rewards, player engagement and level design [5].