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WHAT IS WEB 3.0 AND WHAT IT MEANS FOR US

Tushinsky S.V.

Belarusian State University of Informatics and Radioelectronics, Minsk, Republic of Belarus
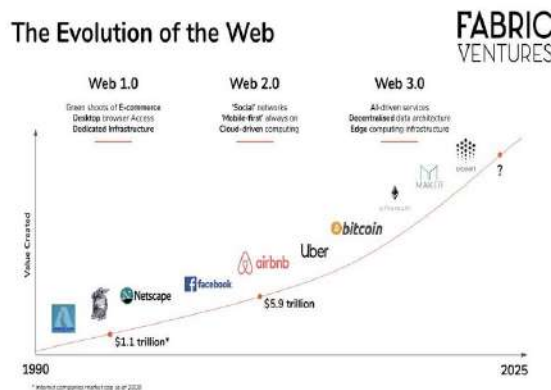
Lazarenko A.M. - senior lecturer of the department of foreign languages

Annotation. Web 3.0 is the upcoming third generation of the Internet where websites and apps will be able to process information in a smart human-like way through technologies like machine learning, Big Data, decentralized ledger technology, etc. Web 3.0 will bring us a fairer internet by enabling the individual to be a sovereign. True sovereignty implies owning and being able to control who profits from one's time and information.

Keywords. Web 1.0, Web 2.0, Web 3.0, blockchain, metaverse, decentralized finance, cryptocurrencies.

Web 3.0 is an idea for a new iteration of the World Wide Web based on blockchain technology, which incorporates concepts such as decentralization and token-based economics. In the 2020s, more companies, developers, and users are talking about Web 3.0, the third "generation" of the Internet, in which blockchain technologies will play a major role. According to the new philosophy, power will no longer be concentrated in the hands of large corporations and institutions. But in order to understand more accurately what Web 3.0 is, we should know what stages were before.

The entire phase of Web 1.0 lasted from 1991 to 2004. Many people describe this stage as "Read Only", which explains the basic concepts. Users were only able to view pages and interact with content. The Internet has not yet developed opportunities for users to participate in content creation, they only consumed what appeared on web resources. No authorizations, trackers and registrations.

Picture 1 – The evolution of the web

We have had Web 2.0 from 2004 until now. During this time the web evolved a lot. The exponential growth of Web 2.0 has been driven by key innovations such as mobile Internet access, social networks and cloud technologies. But the most important difference from Web 1.0 is that not only users get information from pages, Web-pages started getting information from us. As we viewed Facebook, Youtube and performed Google searches, these centralized companies started collecting data about us, so that they could serve us better content, which in turn would make us stay on their website longer. Web 2.0 – age of targeted advertising and lack of privacy.

The main concepts of Web 3.0 were outlined by Jason Calacanis in 2007. He believes that on the basis of Web 2.0 there should be a new space that solves the main problems. Tim O'Reilly supported the ideas of Calacanis at the time, and also noted that Web 3.0 should go beyond the usual understanding of the Web and begin to "interact with the physical world". In order to understand the

next stage of the Internet, we need to pay attention to the following characteristics: Decentralization, Artificial Intelligence and Machine Learning, 3D Graphics and Spatial Web and Freedom.

Picture 2 – Top 15 cryptocurrency

Web 3.0 cannot exist without blockchain technology. Blockchain serves as the foundation of Web 3.0. Web 3.0 would not be possible without the systems provided by blockchain. The enhanced security and privacy offered with blockchain is something that the developers of Web 3.0 are using to appeal to internet users. Since blockchain is a decentralized system, there is no single point of control that could be easily hacked. For Web 3.0, this means that individual websites and the internet, in general, would be much more secure against attacks. Users would not have to worry about their information being deleted or compromised. Together, Web 3.0 and blockchain will allow for better cryptocurrency trading and mining.

Because of its key decentralization feature, Web 3.0 also affects such an area as the economy, which leads to decentralized finance (DeFi). Such services allow you to change and invest in currencies, borrow and lend, secure loans. Only bankers are no longer needed to make transactions, so costs are lower and there is no bias. There are about $200 billion in DeFi protocols as of October 2021.

Cryptocurrencies – it's a digital currency that doesn't rely on any central authority, such as banks and governments. It is used in peer-to-peer transactions that are stored on the blockchain, and that can be stored in digital wallets. These digital currencies have different values and can be converted into real life money. There are 2 types of cryptocurrencies: Crypto Coins, tokens. What you need to keep in mind is that these are types of virtual money that we can use on the Web 3.0 like in the real world, where you have different currencies for different countries.

We've seen how blockchain technology, specifically NFTs, can enable people to participate in virtual worlds, like the metaverse, in recent releases. NFTs are digital assets with programmed scarcity, and as such is an ideal tool to represent ownership of unique virtual assets and digital identity in Web 3.0 and the Metaverse. Metaverses are blockchain-based digital 3D universes that allow anyone to create assets, socialize, play games, invest, and etc. These digital worlds are accessible and extensible thanks to blockchain.

Web 3.0 and metaverses are what awaits us in the near future. The dawn of Web 3.0 will mark the first time in history when biological and artificial intelligence will be globally interconnected and interoperable. It will also redefine the mechanics of human-machine interactions, by facilitating trustless data transfers, automatized, cryptocurrency-based payments, seamless ownership transfers, and much more.

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