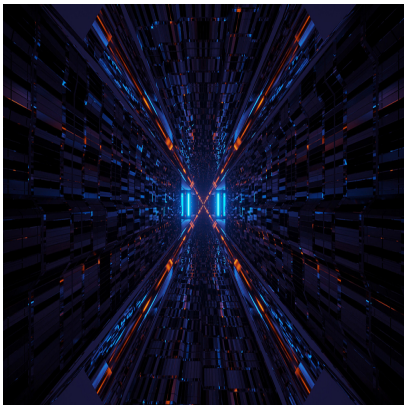

What is the Web 3.0, Really?

Description

First, there was Web 1.0 â?? aka the internet we all know and love. Then there was web 2.0 â?? the user-generated web, heralded by the arrival of social media. Now, wherever we look, people are talking about web 3 (or sometimes, web 3.0) â?? the supposed next big evolutionary leap forward of the internet. But what is it, exactly?

Well, opinions on this differ somewhat. Web3 is currently a work-in-progress and isnâ??t exactly defined yet. However, the main principle is that it will be decentralized â?? rather than controlled by governments and corporations, as is the case with todayâ??s internet â?? and, to some extent, connected to the concept of the â??metaverse.â?•

Before we start â?? just to avoid confusion â?? itâ??s worth mentioning that, until a few years ago, the term â??web 3.0â?• was frequently used to describe what is now known as the â??semantic web.â?• This was a concept put forward by the original â??father of the internet,â?• Sir Tim Berners-Lee, for a machine-to-machine internet. Language is defined by its use, and the term is more frequently used to describe something else now. However, Berners-Leeâ??s concepts are considered to be a part of what we now call web3, although not the entirety of it.

What is the Decentralized Web?

Letâ??s look at decentralization first. Today, all of the infrastructure that the popular sites and hangouts we spend time on online are usually owned by corporations and, to some extent, controlled by regulations set out by governments. This is because this was the simplest way to build network infrastructure â?? someone pays to install servers and set up software on them that people want to access online, and then either charges us to use it or lets us use it for free, as long as we abide by their rules.

Today, we have other options, and in particular, we have blockchain technology. Blockchain is a relatively new method of storing data online, which is built around the two core concepts of encryption and distributed computing.

Encryption means that the data stored on a blockchain can only be accessed by people who have permission to do so â?? even if the data happens to be stored on a computer belonging to someone else, like a government or a corporation.

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And distributed computing means that the file is shared across many computers or servers. If one particular copy of it does not match all of the other copies, then the data in that file isnâ??t valid. This adds another layer of protection, meaning no one person other than whoever is in control of the data can access or change it without the permission of either the person who owns it or the entire distributed network.
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Put together, these concepts mean data can be stored in a way so that it is only ever under the control of the person who owns it, even if it happens to be stored on a server owned by a corporation or subject to the control of a local government. The owner or government can never access or change the data without the keys to the encryption that proves they own it. And even if they shut down or remove their server, the data is still accessible on one of the hundreds of other computers that itâ??s stored on. Pretty clever, right?

Other important concepts that are often used in relation to the technical infrastructure of web3 are that it is open, meaning largely built on open-source software, trustless and permissionless.

Trustless means that interactions and transactions can take place between two parties without the need for a trusted third party. This was not necessarily the case on web2 or below because you would have to be certain that whoever owned the medium you were using to interact or transact was not manipulating your communications.

A good example of a web3 trustless transaction would be sending Bitcoin directly to another person â?? not via an online exchange or wallet stored on a centralized server. The entire process of making the transaction is controlled by the blockchain algorithm and encryption, and there is close to zero chance that anyone can step in and disrupt it.

Similarly, â??permissionlessâ?• means that neither party in a transaction or interaction have to seek permission from a third party (such as a service provider or government) before it can take place.

By the way, if you think all this talk about avoiding government interference sounds a little bit anarchistic or libertarian, then youâ??re not alone! There are still big questions to be answered about the implications that this lack of oversight or control has for safety and legality. Weâ??ve already seen governments attempt to create legislation that will allow them to retain some level of control over communications and interactions on the web3. This includes the UK Governmentâ??s indications that it would like to regulate citizensâ?? ability to send end-to-end encrypted messages.

Web3 Concepts â?? The DAO

The Decentralised Autonomous Organisation (DAO) is a web3 concept describing a group, company or collective that are bound by rules and regulations coded into a blockchain. For example, in a DAO-based shop, the price of all of the items, as well as details on who would get pay-outs from the business, would be held on a blockchain. Shareholders in the DAO would be able to vote to change prices or who gets the money.

However, no individual could change the rules without having permission to do so. And no one who owned the physical infrastructure, such as the server owners, or the owners of the facilities where the profits were stored, could interfere in any way, like running off with the takings!

Crucially, DAOs â?? in theory â?? eliminate the need entirely for many of the â??men-in-the-middleâ?• needed to run an organization â?? such as bankers, lawyers, accountants, and landlords.

Artificial Intelligence (AI) and Web 3.0

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Most people believe that AI will play a big part in web3. This is due to the heavy involvement of machine-to-machine communication and decision-making that will be needed to run many web3 applications.

How Does The Metaverse Fit with Web3?

The last important concept of web3 that we have to cover is the metaverse. In relation to web3, the term â??metaverseâ?• covers the next iteration of the internetâ??s front-end â?? the user interface through which we interact with the online world, communicate with other users, and manipulate data.

Just in case youâ??ve missed all the hype â?? the idea of the metaverse is that it will be a much more immersive, social and persistent version of the internet which we all know and love. It will use technologies like virtual reality (VR) and augmented reality (AR) to draw us in, enabling us to interact with the digital domain in more natural and immersive ways â?? for example, by using virtual hands to pick up and manipulate objects, and our voices to give instructions to machines, or talk to other people. In many ways, the metaverse can be thought of as the interface through which humans will engage with web3 tools and applications.

Itâ??s possible to create web3 applications without the metaverse being involved â?? Bitcoin is one example â?? but itâ??s thought that metaverse technology and experiences will play a big part in the way many of these applications will interact with our lives.

This all sounds great, and everyone must love it, right? Well, actually, no. It should be mentioned that there has been a fair amount of high-profile criticism of web3. The Web 3.0 concept is still evolving and a lot remains to be discovered.

Category

1. Global Landscape
2. Technologies

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