STARTUP ADVICE, TECHNOLOGY

Battle of the blockchains: From Bitcoin to Lisk, five different types of blockchain explained

DOMINIC POWELL / Thursday, December 7, 2017

A common misconception when discussing the enigmatic technology of "the blockchain" is that the technology hangs off just one sort of blockchain — usually assumed to be the same one that the tech's first use case, Bitcoin, is based on.

But in reality, blockchain technology is better compared to different types of operating systems, or programming languages. The overall aim and, in most cases, the baseline technology is all the same, but the technology's functionality, primary use case, and ways it interacts with developers and consumers can differ wildly.

So for startups looking to this emerging technology as a way to develop new avenues for their product, or for

MOST READ

1 Dick Smith: Don't be mistaken, Amazon will "slowly strangle" and "destroy" Aussie retailers

2 Get learning: 16 free online courses for entrepreneurs to get ahead in 2018

3 Voting-on-the-blockchain startup Horizon State locks in partnership with United Nations, gears up for more partnerships

4 Battle of the blockchains: From Bitcoin to Lisk, five

founders looking to start a new venture altogether, here's a quick breakdown of some of the main options when it comes to picking a blockchain.

1. Bitcoin

The $16,000 poster child of the blockchain, Bitcoin's underlying technology pioneered the concept of a distributed ledger, with its mysterious origin story and baffling valuation bringing the tech into the spotlight.

Unfortunately, the Bitcoin blockchain is somewhat outdated these days, especially compared to other available options, with average transaction times sitting above 30 minutes, and transaction fees reaching over $US20 at its peak. The Bitcoin community has been engaged in multiple, at times fierce, debates over ways to best scale the currency's blockchain, but a lack of consensus has stagnated development.

It's for this reason that most deviations from the original Bitcoin "Core" blockchain mostly focus on Bitcoin's original proposition as a peer-to-peer electronic cash system. These include things like centralised mining resistant Vertcoin, 'joke' cryptocurrency Dogecoin, and Litecoin — a nearly identical Bitcoin clone but with reduced transaction fees and faster block times.

Bitcoin is programmed in C++.

2. Ethereum

The latest up-and-comer in the blockchain world, Ethereum is largely responsible for the huge wave of initial coin offerings (ICOs) conducted over 2017, which in total have raised upwards of $US3 billion. The Ethereum blockchain is

different types of blockchain explained

5 Amazon launches in Australia, showing why industry predictions are futile

similar to Bitcoin's in the sense of allowing transactions through its 'ether' token, but the blockchain also includes a "smart contract" functionality, which unlocks a world of potential.

Smart contracts are essentially self-fulfilling contract arrangements registered, stored, and executed on the Ethereum blockchain. They break open the sole currency-focused use of blockchains like Bitcoin, and allow developers to implement a number of parameters — effectively allowing for applications and code to be executed on the blockchain, without the need for a third party such as a server.

Ethereum has been likened to a global computer that anyone can program on, and startups have been quick to jump on board. Thanks to the programmable nature of the blockchain, decentralised applications can easily be built on the technology. These applications are often integrated with tradeable tokens, which can be issued to users via the Ethereum network, forming the basis for an initial coin offering.

Australian blockchain companies such as Power Ledger, which raised $34 million through an ICO, have used Ethereum to build their programs.

Not exempt from its own scaling issues, Ethereum can run into trouble at times of high network congestion. Currently, the network's capabilities are being tested thanks to an application known as Cryptokitties overloading the main blockchain. Cryptokitties allows users to buy, sell, and trade virtual kittens on the blockchain.

However, a number of measures are in the developer's roadmap for 2018, with the eventual goal of improving the network's capability many times over.

Ethereum is programmed in a custom smart contract programming language known as Solidity, which is similar to Java.

How to keep customers coming back to your business – top tips from Smart50 winners

PILOT LIGHT

Lessons in business from people under 20

Logo source: The Ethereum Foundation.

3. New Economy Movement (NEM)

As explained by NEM developer and startup founder David Oh, the NEM blockchain differs from Bitcoin and Ethereum as it allows developers to interact with it remotely through the use of Application Programming Interfaces (APIs).

“For Bitcoin, you need someone with a deep understanding of cryptography to make it anything beyond a digital store of value, and for Ethereum you need a developer proficient in Solidity, which isn’t so easy to program in,” Oh says.

“NEM works via APIs, so you’re not actually programming the blockchain itself. You can write in any language you want, Javascript, Ruby on Rails, etcetera, and it just interacts through the APIs.”

Being able to interact with the NEM blockchain isn’t the only advantage the platform claims to have over its rivals; it also boasts alternatives to energy-consuming mining through a system based on the number of users holding and transferring the currency.

NEM claims its use cases vary from basic financial services to applications such as voting, escrow, accounting, logistics, and more. NEM was written in Java.

4. Lisk

A not-often-mentioned blockchain program, Lisk came into being during 2016, raising $US5.8 million through an ICO. At the time, it was considered the second most successful ICO, but was very quickly outpaced.

Many similarities can be drawn between Lisk and Ethereum, and the two platforms have similar goals and development

opportunities. The goal of the Lisk platform is to help developers create and facilitate decentralised apps on the blockchain, much like Ethereum.

However, the main difference between the two programs is where the application is stored, and the language the application is written in. On Lisk, developers creating applications can store them in "side chains" not located on the main blockchain. This allows for greater scalability and customisation, but trades off easy fixability if the code is found to be bogus.

Lisk is also programmed in the common language of Java.

5. Hyperledger

Hyperledger is unique in this list as it's not associated with any tradeable form of currency or token. Instead, Hyperledger is a blockchain solution created by the Linux Foundation and is the general term for a number of open-source blockchain protocols and projects.

These include Burrow, an Ethereum-compatible smart contracts application, and its main offering, Hyperledger Fabric. Fabric is a fully-fledged blockchain framework currently used by IBM, with a similar capability of allowing developers to build applications and implement things such as smart contracts.

To use Fabric, users must be permissioned, meaning their identities are known. This posts the chain as an attractive option for many large companies, including listed ones that must comply with various disclosure laws. Hyperledger's blockchains are also private, meaning they cannot be easily interacted with by the public.

However, the project's "chaincode" can allow companies to create tokens or currencies on the platform.

Follow StartupSmart on Facebook, Twitter, LinkedIn and iTunes.

Advertisement

Dominic Powell

Dominic Powell is a journalist at StartupSmart and a tech and music geek. When he's not writing, you can find him reading or browsing record shops.

SmartCompany is the leading online publication in Australia for free news, information and resources catering to Australia's entrepreneurs, small and medium business owners and business managers.

Monday to Friday, SmartCompany.com.au publishes news, business trends and ideas from around the world, profiles and features, as well as all the latest business, tax, legal, marketing, politics and innovation developments occurring around the country.