

# What is a Blockchain and Why Should I Care?

Mike Butcher was about to get paid for a graphic design job, when the unthinkable happened.

PayPal froze his account.

He said, "When PayPal froze my funds and I couldn't access them for weeks, I realized that something like Bitcoin is important. I don't like trusting a third party with my money."

If you've ever had your account frozen, had to wait to get access to your own money, paid unnecessary fees, had your identity stolen, or had any trouble send money to another country, you can see the beauty of cryptocurrencies - There is no middleman meddling in your finances.

For Butcher, getting his account frozen was a blessing in disguise. For the next several months he devoted his free time to learning everything he could about Blockchain technology, all the different coins and the tech behind them, and how to trade successfully. He started a Facebook group called The Bitcoin Beehive where he passes on information about investing in cryptocurrencies.

"I made 17K in the last two weeks," said Butcher. "Speculative or not, there is more money flowing into this market everyday.... Crypto has done nothing but improve my life and there's no denying that."

## **As of November 27th, the price of one Bitcoin is \$9764.98**

The [price of Bitcoin first exceeded \\$9,000](#) on November 26th and continues to rise. As a result, the total market value of cryptocurrencies rose to over \$300 billion. This increase in value is happening very quickly. In June, the market rose above \$100 billion and in early November it rose about \$200 billion.

When you hear these numbers, it is easy to get excited and want to jump in.

But if you're a beginner, you might hesitate, simply because you have some basic questions.

# What is a blockchain?

According to the a report titled [“How to Crypto, a Step-by-Step Beginners Guide”](#), published in Bitcoin Beehive, a blockchain is a “digital ledger in which transactions made in bitcoin or another cryptocurrency are recorded chronologically and publicly.”

Satoshi Nakomoto (an anonymous person or group) released a white paper that laid out the model for how Bitcoin would work, changing how money works worldwide.

Blockgeeks explain the basic properties of blockchain technology in their [“What is Cryptoeconomics”](#) guide.

Each block has information on the transactions, while keeping the identity of the people making the transaction anonymous. Using cryptographic hash functions, the information from the new blocks are connected to the old blocks without changing the information. Anyone can download and access information about a particular transaction.

The information is organized in a linked list. Each block contains a hash pointer which points to the previous block and the hash of all the data in it.

The blocks are further organized into [merkle trees](#), tree shaped proofs that can communicate large amounts of data and include small details of each transaction, like the hash of the previous header, a timestamp, a proof of work nonce, a root hash with all the transactions for that block.

Blockchains technology is complicated (It was created by computer scientists, after all) but there are many reasons why you should care about it.

## Understanding Blockchain Technology will help you Understand Your Investment

Bitcoin is doing so well that many people will advise you to simply buy some and start making money. One place you can do that is on a website called [Coinbase](#).

Do you still have questions?

Fair enough.

Cryptocurrencies make more sense if you understand the Blockchain technology that makes it work.

## **Understanding the technology will make it easier to recognize opportunities and avoid mistakes.**

With all the emerging technologies, different types of coins, and different ways to make money through cryptocurrencies, the more you understand about how it works.

Even now, as the price of Bitcoin approaches \$10,000, would it be better to invest in Ethereum or another altcoin? Armed with more information, you'll be able to make a more informed decision.

## **Understanding blockchain technology will help you understand the security issues that surround cryptocurrencies.**

People like Butcher turned to Bitcoin and cryptocurrencies when he couldn't access his funds. And so he is attracted to the idea that money can be passed from person to person without the interference of the government or big corporations.

He said, "There are many reasons but I think the biggest reason is this... For the first time in human history we have a decentralized, global form of exchange that requires no middle man to use. This is extremely important for the evolution of us as a free people. No longer can a bank freeze my funds or tell me I can't withdraw my money or tell me I can't send it to someone in Japan. Big bank manipulation and corporate level security breaches become a thing of the past when you dig into the beauty of blockchain. The power and the value are being put back into the people's hands."

In his article, "[Why the world needs a decentralized currency](#)," Rajath Alex points to the times when countries have taken over banks and even prevented people from withdrawing money from their accounts during financial crises and war.

Alex also points out how expensive traditional banking systems can be. He said, "My dad has to pay around \$30 in net transaction fees just to transfer money internationally from back home to my bank account here in the US."

There are no transaction fees with Bitcoin.

## **Understanding blockchains will be able to help you stay on the right side of the law**

When people say that cryptocurrencies transaction are anonymous, does that mean that they are exempt from taxes?

Apparently not.

When only 802 people declared their earnings on their 2015 taxes, the IRS decided that they would have to find a way to [monitor blockchain transactions](#). They have contracted with Chainalysis, a company that works with law enforcement and regulatory agencies and banks to track Bitcoin transactions.

The rules may be changing.

And when the rules of cryptocurrency change, it's called a hardfork. Since every user needs to agree on how the system will operate, any change in the system will result in a new currency.

That's why there are so many different competing coins, including Ethereum, which experienced a hardfork after \$50 million in ether was stolen from a venture capital firm because of a security breach. Some of the members started a new chain while others continued to use the original blockchain.

## **Ethereum is the most exciting crypto because of its blockchain technology.**

Ethereum is quickly becoming the second most accepted and valuable form of cryptocurrency, but it [operates differently](#) than Bitcoin.

With Ethereum, developers use an open software platform based on blockchain technology to build and deploy decentralized applications.

Unlike with bitcoin, Ethereum miners earn a type of crypto token called ether. Ether fuels the network and serves as a tradable cryptocurrency. Application developers also pay for fees and services on the Ethereum network using ether.

Ethereum is developing a new way to mine ether, using what they call the [Casper Protocol](#).

Most cryptocurrencies use “proof of work” in their blockchains. Doing this takes up a lot of energy and computing power, but it is pretty simple to tell if it has been done right.

The problem is that, because of all the computational power that it takes up, people with powerful ASICs have a better chance of mining more coins and thus, people and organizations that can afford better computers can mine more coins, which means that the system isn’t as decentralized as the creators would like it to be. A few people have all the power.

The solution that they are using is “proof of stake.”

With proof of stake, there are validators instead of miners. The validators have to lock up some of their coins as stake. When they find a block that can be added to the chain, they validate it by placing a bet on it. When the blocks get added they are rewarded in accordance to the size of the bets.

The casper protocol reduces the risk of having a malicious miner creating a hardfork.

## **Smart contracts are the disrupters of the future**

Have you ever had a contract with someone and then the other person breaks the contract for some reason, and you don’t get paid, and you aren’t sure what to do about it?

Blockchains make it possible to include the terms of the payment with the payment itself using [smart contracts](#).

Nick Szabo invented “bit gold” in 1998, and (although he denies it) there are rumors that he is the real Satoshi Nakamoto.

In a paper he devised smart contracts, which are incorporated into the Ethereum blockchain. A smart contract is a code where the terms of the agreement between the buyer and the seller are included in the lines of code so that everyone in the blockchain network can see it.

**More people are adopting the technology every day.**

Blockchain technology is changing how the financial world works.

Even if you don't currently use Bitcoin, more businesses are accepting it and it will be a part of everyday life eventually.

Cryptocurrencies are the first currency used everywhere around the globe since gold. And like gold, you need to understand how to use it, store it, and keep it safe.