A Basic Guide to Blockchain

canopy The úrst robust, easy-to-use Tax Resolution software.

Blockchain Demystified

canopy The úrst robust, easy-to-use Tax Resolution software.

Contents

1

What is Blockchain?

One line definition:

Blockchain is a distributed ledger of digital ownership.

In other words, blockchain is a digital record of who owned (and owns) what, when they owned it, and the condition of the thing when it was created, bought, and sold.

That makes sense, right?

Maybe. Just in case, let's take a closer look at two terms from our definition: "distributed ledger" and "digital ownership."

A distributed ledger is the fundamental core of what blockchain is. The ledger in a blockchain is made up of (you guessed it) blocks. The blocks are simply the name given to records of events and transactions that are stored on the blockchain. When an event or transaction takes place, a distributed network of computers independently verifies, secures, and records the details of the transaction. Each event and transaction (block) is linked together (chain) to create a detailed history of ownership.

Digital ownership is the problem that blockchain is designed to solve. Some items are easily copied and shared—music, videos, articles, ebooks. The internet is full of digital copies of these things, both legal and illicit. The ownership of informational items like these are easy to track because the original rarely, if ever, changes hands. We simply purchase (or are given) the right to view a copy of the original.

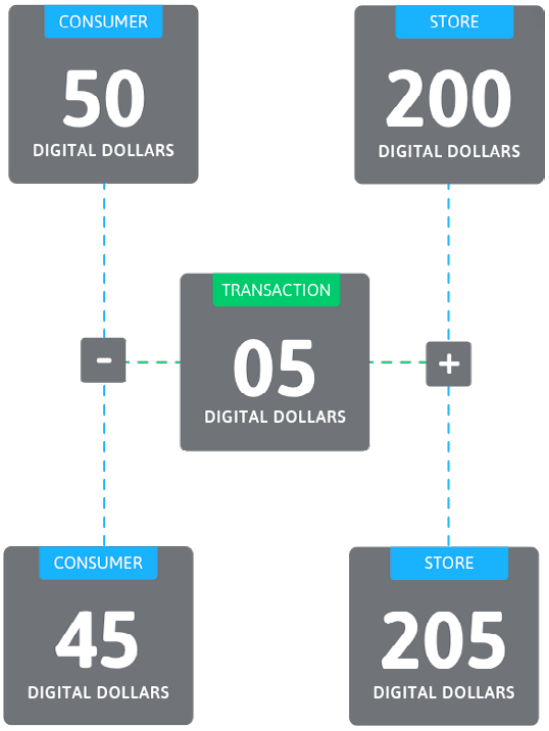
That method of ownership doesn't work for all items though. Some items—currency, real estate, commodities and goods—can't be copied and those copies distributed. They can't be owned simultaneously by two parties, so record of ownership becomes both vital and difficult to track. As a simple example, when a person spends digital money (basically anything but cash or check), someone has to ensure that the money is actually transferred rather than copied. A blockchain is designed to keep an instantaneous record of transactions, thereby ensuring that no two people can own the same thing at the same time.

I don't understand a word of what you just said.

That's okay. Blockchain technology is an abstract idea. But now that you have the foundation, we can get into the real world applications to help you understand better.

2

Why Does Blockchain Matter?



The answer to that question is deceptively simple. Blockchain matters because it creates an immutable system of trust. For the sake of this whitepaper, we're going to skip the technical details of how exactly the blockchain is secured in a way that make its record immutable. Just know that because of its decentralized and cryptographically secured nature, the blockchain is as accurate as we know how to make anything. You can find excellent explanations of that here and here if you want to learn more about the technical details.

But none of that explains how why an immutable system of trust is so revolutionary. Don't we already have a pretty good system of trust?

Yes and no. Obviously the system we have now works. But it's also slow, expensive, and easily corruptible.

Cryptocurrency

When you spend digital money, you're not simply transferring your money to the vendor or retailer. You have to get intermediaries involved to make the transaction happen. One or more financial institutions (usually a bank and a credit company like Visa) act as intermediaries to guarantee your transaction and another intermediary does the payment processing. The process usually takes days and everyone takes a little cut along the way. That's a lot of inefficiency.

With a blockchain-based cryptocurrency (such as Bitcoin), the process is much simpler—and nearly instantaneous. When you complete a transaction with cryptocurrency the payment simply transfers from you to the seller, no intermediaries required. The blockchain verifies and records the details of the transaction (while still allowing you to keep your identity safely anonymous). Because the blockchain is entirely automated, the transaction cost is negligible to non-existent.

Other Applications

Obviously not everything can be digitally transferred like digital money. The blockchain obviously can't transfer physical items, but it can transfer ownership of physical things.

Let that sink in for a bit. The possibilities are nearly endless. Companies are already using the blockchain across multiple industries. For example:

Diamonds

Everledger is using blockchain technology in order to certify that companies are buying ethically sourced diamonds. Using high-resolution images, Everledger creates a digital twin of each diamond and uploads it to the blockchain. With this record on the blockchain, Everledger is able replace easily forgeable paper certification and accurately track the diamonds.

SOURCE

George Dairy
(ID# WY8241439103)

Milk harvested from herd 2C

(holstein ID# 3598-3641)

Date stamp: 4:56 MST, 11.21.2017

Initial quality check: passed

Milk added to tank 13

TRANSACTION
$3600

Purchase by processing plant
2,000 gallons raw milk

PROCESSING

Moo Makers Processing
(ID# MT5910137)

Date Stamp: 21:19 MST, 11.22.2017

Arrival inspection: passed

Batch processed 13:06 MST, 11.24.2017

Batch bottled 06:18 MST, 11.25.2017

Batch labeled to expire 12.22.2017

TRANSACTION
$5000

Purchase by retail store
2,000 gallons whole milk

RETAIL

Arrived at distribution center
(ID# CO8053885)

Arrival: 02:29 MST, 11.27.2017

500 gallons arrived at store
(ID# CO8090713)

Arrival: 05:54 MST, 11.27.2017

TRANSACTION
$6.13

Purchase by consumer
2 gallons whole milk

Food

Walmart is experimenting with their own blockchain to closely track the supply chain of food. Details such as exactly when produce was harvested, whether or not it is pesticide free, and how long it sat in the warehouse can all be uploaded to a block and easily tracked on the blockchain.

Real Estate Title Transfers

A startup recently successfully transferred a deed of ownership in Chicago using the Bitcoin blockchain. This type of use case is still in the very early stages of testing, but the goal is to make the purchase of real property as seamless as any other purchase.

And these are only a few of blockchain technologies potential applications. Blockchain has the potential to accurately track the condition and ownership of anything we care to keep track of.

3

How Will Blockchain Affect the Accounting Industry?

"No one knows yet" is a very unsatisfying answer, but that doesn't make it any less true. No company (that we know of) is applying blockchain to the tax and accounting industry yet, and the technology is still so young that it's impossible to know for sure what the future holds.

That said, we can make a few guesses based on what we know about the nature of blockchain.

Double entry bookkeeping will (eventually) disappear.

Don't count on this happening any time soon, but with the aid of blockchain technology we will eventually transition to a totally digital system of money. When that happens, the blockchain will automatically and continuously update every person's and company's "books," running what is essentially a continuous audit. Bookkeepers may still be hired to look for discrepancies in the blockchain, but bookkeeping as we know it today will likely disappear.

Taxes and tax returns will become largely automated.

Smart contracts will automatically determine how much every entity owes in taxes each time a transaction takes place. Those taxes will be automatically sent to the appropriate government without the taxpayer or company ever handling the money. When tax season rolls around, taxpayers will only need to submit a return if they want to contest the amount of tax their blockchain-compiled tax return claims they owe.

People will still need the services of accountants and tax pros.

All of this may seem stressful, but don't give up on the future of accounting just yet. Automating tasks like bookkeeping and tax preparation will free up accountants and tax pros to focus on more valuable services such as tax planning and consulting. The changes that will come with widescale adoption of blockchain will certainly require you to adapt, but there's no reason that transition has to be a bad one.

4

How Sure Are We About Any of This?

Do you remember the kinds of conversations people had about the internet in the mid 90s? Unless you were talking to a computer scientist, very few people had a good grasp of what this new internet thing really was. Even if they did, people struggled to talk about it or explain it with any kind of clarity. Just look at this clip from Good Morning America from 1994.

The best definition of the internet they can muster up is "It's a computer billboard, but it's nation-wide. It's several universities all joined together, and it's getting bigger and bigger all the time."

Nation-wide computer billboard? That's not even close to a good definition of the internet.

Granted, the internet has matured a bit since the mid 90s, but the core of the internet is the same now as it was then. No one would explain the internet that way now. We would say that the internet is public computer network that allows us to share and store information. Simple, right? But that clarity has come with time and familiarity with the internet.

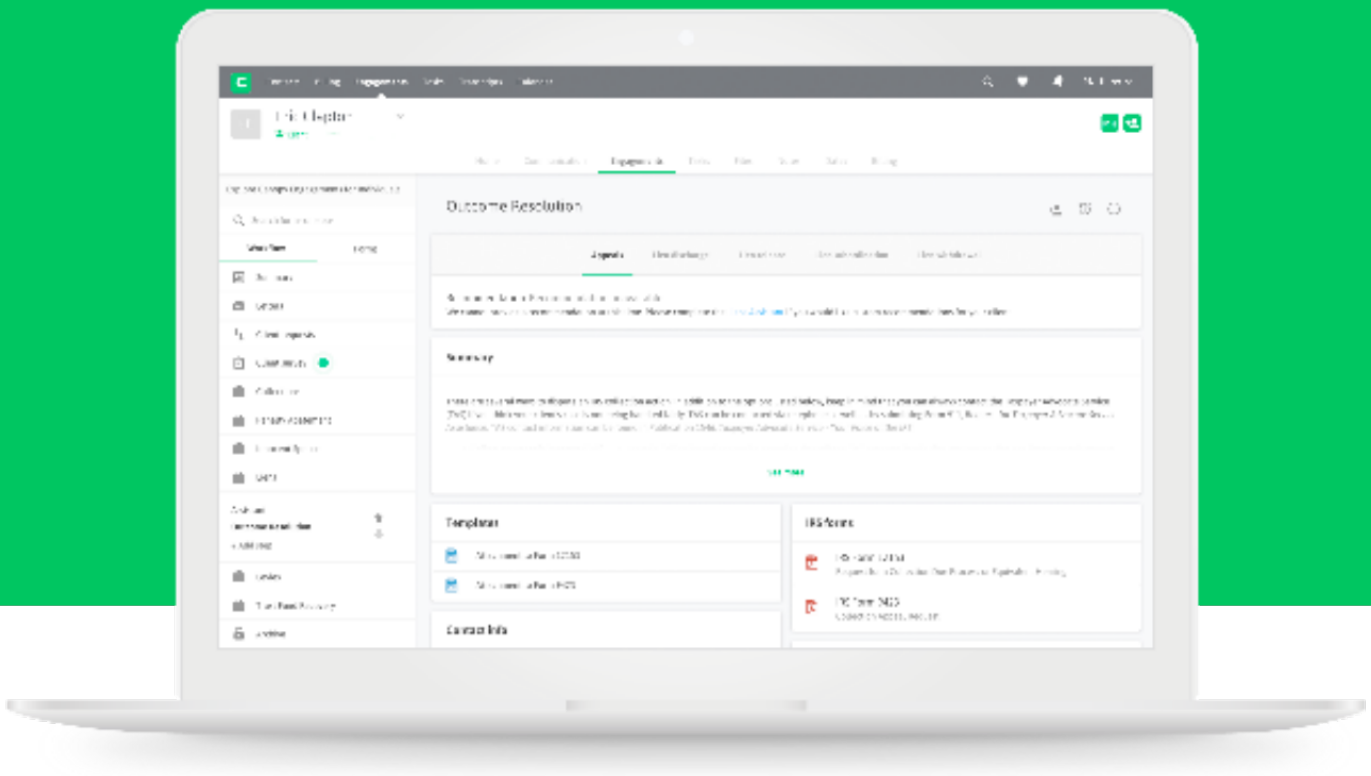
As far as adoption rate and integration into our lives, blockchain right now has a lot in common with the internet in 1994. It's starting to generate enough excitement to catch the attention of the general public, but only a small minority of early adopters make use of a blockchain. Of those early adopters, only a tiny fraction use a blockchain regularly.

So do we really know what blockchain is yet? Probably not. It's entirely likely that we will look back 20 years from now and laugh at the simplistic understanding we had of blockchain in 2017.

That being said, with a recent example of how a truly revolutionary technology (the internet) can change the world, we feel like we know enough to be very excited about the future of blockchain. In a future where blockchain frees us from tedious information-gathering tasks that are so essential today, we will all have more time and resources to spend doing things we love.

Blockchain is weird and confusing. Here's a software that isn't.

Plus it can save you hours every week.



Canopy's intuitive design and smart automation eliminates tax busywork so you can focus on the important stuff.

- Secure client portal
- IRS transcript delivery & reports
- Workflow tools
- Integrated communication
- Auto-populated IRS forms
- And a whole lot more.

Try it free at canopytax.com

No credit card required.