



## The New Digital Era: blockchain, cryptocurrency, and ICOs PART 1

AUTHORS // Brad Vinning and Ruby Mackenzie-Harris

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Now that cryptocurrency mania is all over social media, and even entering mainstream media content, most people will have heard of “Bitcoin”. Bitcoin is a form of “cryptocurrency”, an entirely digital form of currency the price of which is highly speculative. Although we will start this three-part series with a discussion of Bitcoin, this is only scratching the surface of the most exciting and lucrative digital phenomenon since the creation of the internet itself.

We will be taking you step by step through this incredible and nuanced digital world, and by the end your lexicon will be vastly improved to include new understandings of cryptocurrency, fiat currency, coins and tokens, blockchain, initial coin offerings, token generation events and investment. Believe me, you will impress all of your peers, friends and clients when the question is next

raised “does anyone know anything about cryptocurrency or something called an ‘ICO’?”

### Key Terms

<b>Bitcoin</b>	A form of digital “cryptocurrency”, of which every transaction is recorded in the cloud.
<b>Blockchain</b>	A digital ledger which records all transactions made using a particular cryptocurrency coin or token.
<b>Coin</b>	Units of a cryptocurrency which can be purchased with fiat currency (eg AUD), which act as simple stores of value.
<b>Token</b>	A complex, multifaceted version of a coin. They can act as programmable “smart contracts” between blockchain users.
<b>Coin Mining</b>	The process of verifying and adding transactions to the blockchain, as well as the method for creating and releasing new coins/tokens. With internet and suitable hardware, anyone can be a miner.
<b>ICO</b>	Initial Coin Offering: the first time a new coin/token is publicly offered, which investors/participants in the blockchain platform can purchase with other cryptocurrency, or sometimes fiat.



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## THE BASICS

In order to understand how cryptocurrency works we need to understand the basics around the technology which underpins it: the blockchain.

Historically, the first work on a cryptographically secured chain of blocks was described in 1991 by Stuart Haber and W. Scott Stornetta. But for all intents and purposes the first mention of blockchain comes from Satoshi Nakamoto's white paper for Bitcoin in 2008. So whilst Satoshi's white paper introduced blockchain and Bitcoin at the same time, when Brad Vinning interviewed Katrina Donaghy, co-founder of Australian blockchain tech company Civic Ledger, she succinctly said:

*"the blockchain is not Bitcoin, and Bitcoin is not the blockchain".*

However, they are closely related. When Bitcoin was released as open source code, blockchain was wrapped up together with it in the same solution. And since Bitcoin was the first application of blockchain, people often inadvertently used "Bitcoin" to mean blockchain.

[Katrina describes the blockchain](#) as a digital layer which underpins cryptocurrency and token trade, allowing a digitised asset (such as cryptocurrency) to be moved around on the blockchain platform through peer-to-peer (P2P) transactions which are transparent and immutable.

We don't propose going into the detail of how the blockchain works because there is a plethora of [information](#) on the internet that can be easily accessed. Instead, we are interested in how blockchain technology is being used for creating cryptocurrencies and tradable digital tokens.

## FIAT CURRENCY V CRYPTOCURRENCY

Fiat currency refers to the legal tender of a country such as AUD, USD, Pound Sterling, each backed by the government that issues it. The main difference between cryptocurrency and fiat currency is that the latter is regulated by the centralised control of the sovereign state, whereas cryptocurrency is decentralised.

Cryptocurrencies are "decentralised" because transactions are authenticated and recorded on multiple copies of the same digital ledger which collectively form the blockchain. For comparison to central systems, think of a standard bank transaction, where you want to transfer money to another person. You send the request through the bank's centralised system, they process it over the next 1 to 3 business days (or longer for international transactions), and you *trust* that the end result is the correct transfer of the money. Blockchain on the other hand allows people to make traceable peer-to-peer transactions without the influence of an entity centrally controlling the currency or transfer.

Blockchain transactions are based on proof, not trust. Using the example of the Bitcoin blockchain, transactions are recorded after a "miner" has computationally validated it, and other miners can check the validity of this record. This makes it extremely easy to check if the transaction indeed is true and did happen.

Once the transaction is recorded in a block and this block is added to the blockchain, the transaction is immutable as well, since each and every person mining has a copy of this block attached to the Blockchain. Even the slightest change would mean that everyone's copy of the transaction would have to be overwritten requiring such an immense amount of computing power it is almost impossible to comprehend.

## ARE COINS AND TOKENS THE SAME THING?

People often interchangeably refer to the units of cryptocurrency as "coins" or "tokens". But this is misleading – they are not the same thing.

"Coins", such as bitcoins, are the units of a fully digital cryptocurrency which can be purchased with fiat currency (e.g AUD), and they really only have one utility—to act as simple stores of value with limited to no other functionality. Coins can be used in the real world, wherever a business chooses to accept it, but it is most commonly used for online transactions, particularly buying tokens.

"Tokens" are a completely different breed all together which can store complex, multi-faceted levels of value. They can be "smart contracts", programmable to do certain things in relation to the underlying tradable asset, when triggered by specified events.

Probably the easiest way to explain the application of a token is to think of a casino. If you want to play roulette you first need to exchange your AUD at the cashier for casino chips, then you place your casino chips on the roulette table to play, as a record of your bet. If you are lucky enough to have any chips left at the end of your night, you can exchange them back for AUD.

Now let's apply this to a bet made with crypto tokens. Australian based wagering platform, Skrilla, allows users of its platform to place secure bets by using tokens generated by Skrilla called "SKR". First you exchange your AUD for Ethereum (a cryptocurrency similar to Bitcoin), then you use your Ethereum to buy "SKR". If you want to place a wager on the Skrilla platform you must use your SKR. On completion of the activity the subject of the bet, the SKR will be automatically transferred on the blockchain to the winner of the wager.

Right now you might be thinking that a SKR and similar cryptocurrencies don't resemble currencies at all but are

more akin to chips at a casino. We tend to agree with you, which is why many people prefer to refer to them as tokens. But unlike a casino chip the number of tokens created by issuers like Skrilla is finite and the laws of supply and demand will determine the worth of a SKR. So in this respect it resembles a currency, whose value will fluctuate over time based on a range of micro and macro economic factors. Hence the interchangeable terminology between crypto coins and tokens.

#### TYPES OF TOKENS

A token can take the form of many different things. For the purpose of our discussion we will focus only on two types:

1. Equity tokens – much like a traditional share in a company, an equity token gives you ownership rights in something.
2. Utility tokens – provide holders with access to a product or service. Think Skrilla and casino chips: they tend to have no value outside the platform where the utility token can be used.

This distinction is important, especially when we start discussing ICOs. You may want to raise money by issuing utility tokens. But if there is no product or service on which it can be used there is no economic reason for anyone wanting to own your tokens and, speculators aside, your ICO will probably fail. It is a bit like printing casino chips but there being no casino or your casino is so bad no one wants to go there. Would you buy chips that can only be used in a casino like this?

#### NEXT INSTALMENTS

In the next two instalments of this intriguing discussion we will delve into:

- What cryptocurrency is used for
- Initial Coin Offerings (ICOs)
- The differences between ICOs and Initial Public Offerings (IPO)
- A recent Australian ICO
- How much money is involved in ICOs
- The legal and regulatory aspects of blockchain and ICOs
- Know Your Client (KYC) and Anti-Money Laundering (AML) regulations
- How you can start participating in the world of coins, tokens and ICOs

#### FOR MORE INFORMATION, PLEASE CONTACT:



Brad Vinning //  
Partner

T 61 7 3001 9235

E B.Vinning@clarkekann.com.au



Ruby Mackenzie-Harris //  
Lawyer

T 61 7 3001 9248

E R.Mackenzie-Harris@clarkekann.com.au