

ObitanChain Technical Whitepaper

01-15-2018



ObitanChain

Abstract

This Whitepaper was authored as a base document for “ObitanChain”, detailing the features, functionality and research behind the new anonymous Cryptocurrency, as well as providing insight into its usage and implementation. Our Solution is based off of the Edge computing technology, and incorporates multi-signature outputs and encrypted ring signatures.

The ObitanChain Project is based on Edge computing technology.

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Introduction

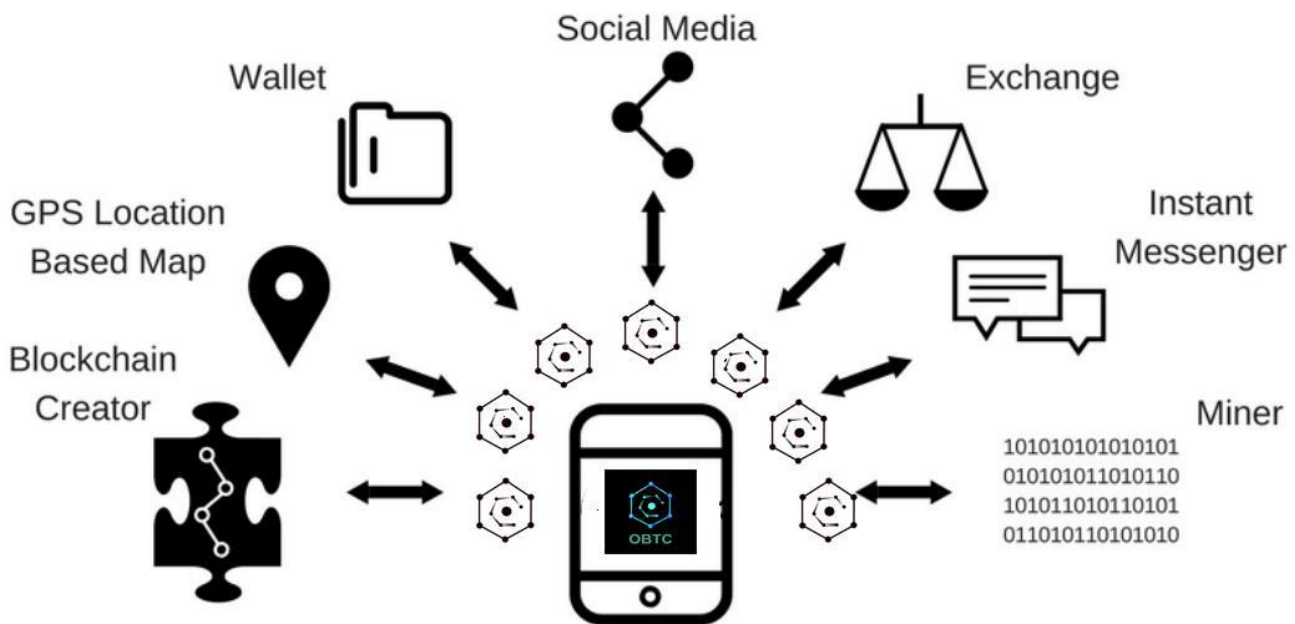
Along with the emergence of cryptocurrencies, the blockchain technology has developed rapidly in recent years. In some countries, blockchain technology was mooted as one of the frontier technologies within the National Strategic Layout. Blockchain technology is going to provide the fundamental infrastructure for the next generation of Internet – the Internet of Value, and is now collaborating with emerging technologies in different fields to progressively expand the application range. As we know, IoT network is seen as an extension of the Internet, so it is inevitable that IoT will eventually be merged with blockchain. Especially considering the security issues involved with massive amounts of data potentially being collected by IoT devices in the future.

ObitanChain aims to solve a wide range of the current problems of IoT networks in terms of data security, data circulation, data sharing and data transactions, thus enhancing the efficiency of the whole IoT ecosystem. ObitanChain introduces the concept of “lastic sharding at layer one” which facilitates the integration of IoT devices with the ObitanChain blockchain network. With the use of Edge Computing technology, it enables every device on the IoT network to be utilized as a mining machine, making every IoT device that uses ObitanChain subject to mining rewards. Owing to the use of blockchain technology, the data source will always be reliable and verifiable on the ObitanChain network. Furthermore, the value of the data is quantified and data transfers are fast and secured. This makes it easier for IoT standards to emerge, unlocks a plethora of new IoT application scenarios and boosts the whole industry to enter the next level of development.

1- ObitanChains' Usage

A Cryptocurrency gets its value from how and where it can be used. By creating and identifying possible uses for ObitanChain we've ensured its value.

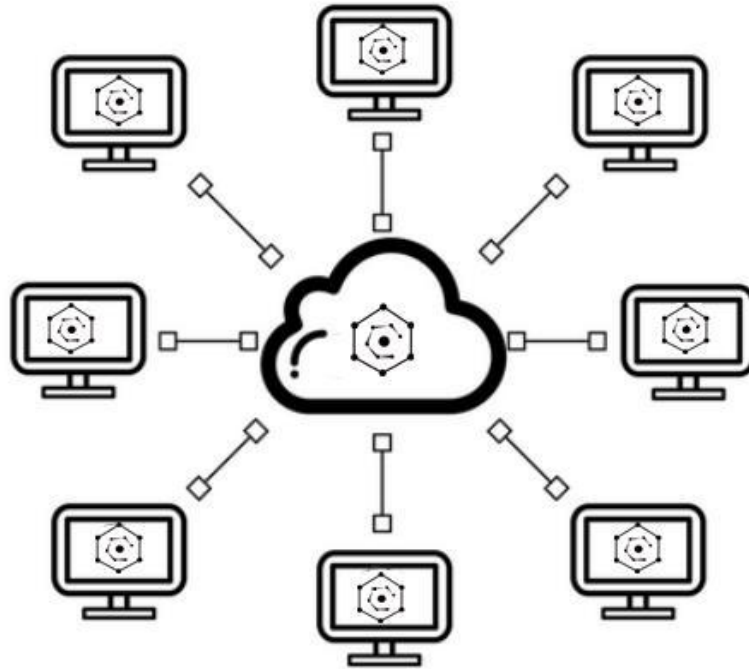
1.1- As the Base Currency of the ObitanChain App



ObitanChain will be the base and encouraged currency for use within the ObitanChain App.

All purchases and micro-purchases made from the ObitanChain App will be made using ObitanChain, this streamlines the process and makes the currency uniform for all features and functions of the App.

1.2- As Incentive for 3rd Party Miners

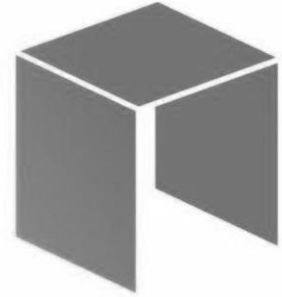


Every aspect and feature of the ObitanChain App is Blockchain based and therefore needs to be mined.

ObitanChain will be used to incentivise and encourage external miners to use their hashing power to maintain and speed up the ObitanChain Decentralized network.

Miners will not only be getting well compensated for their efforts, but are also making an active investment in themselves and the value of ObitanChain as a fast, functional Network will ensure a steady userbase creating usage and therefore value for ObitanChain.

1.3- As a Regular Cryptocurrency

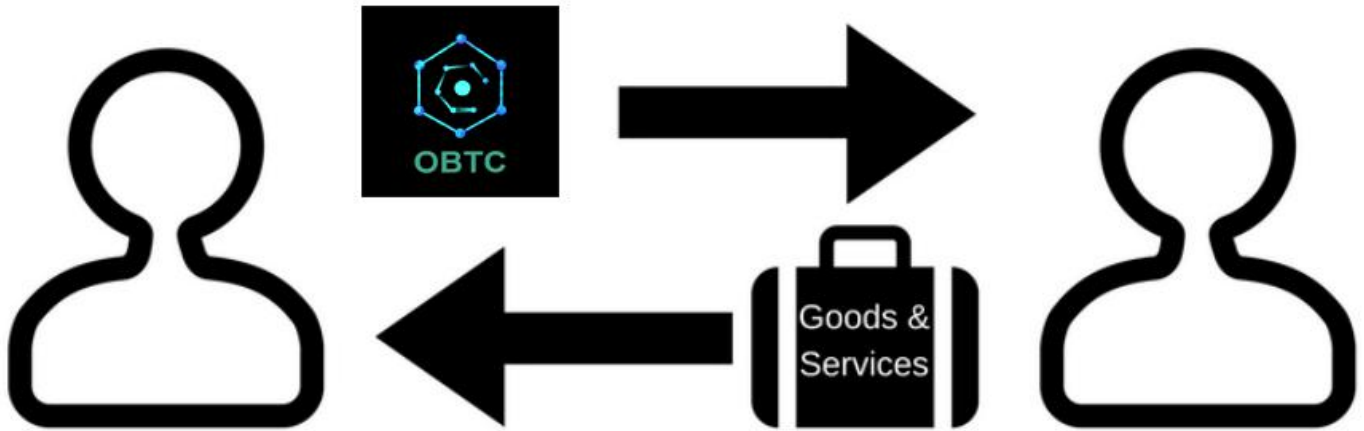


ObitanChain can be used just like any Cryptocurrency, and the usage of which is not bound to the ObitanChain app exclusively.

Users are encouraged to use ObitanChain across multiple platforms and even develop their own external frameworks, platforms, and applications implementing ObitanChain. Any Users wanting to do this will receive the full support, encouragement, and guidance of the ObitanChain team.

Take everything away and ObitanChain is an anonymous, functional, and value orientated Cryptocurrency that should be used on every level.

1.4- As a User to User Alternative for Cash



ObitanChain will foster the trading and exchange of Cryptocurrency for Goods and services on a User to User level.

Users are encouraged to shed the risks of using Fiat Currency between each other and instead use ObitanChain as they ensure safety and value on every level.

ObitanChain transactions will be conducted on multiple levels of use from large corporations to small businesses, to individual users. Its the directive of the ObitanChain Team to make sure that no area of use is neglected and ObitanChain use is fostered on all levels of use.

1.5- As a Long-Term Investment Vehicle



ObitanChain is the fundamental opposite of Fiat currency when it comes to the storage of value.

Users can easily make long-term investments with large returns as ObitanChain is anti-inflationary and gains value over time. Dynamic Block sizes scalable difficulty and steady rewards mean that ObitanChain will be built on value, and the increase thereof.

So whether you're purposefully saving an investment holding of ObitanChain or not, the price and value of ObitanChain is guaranteed to rise overtime by design creating many a millionaire along the way, will you be one of them?

1.6- As a Daily Usage Currency



ObitanChain were designed for use on a daily level.

The infrastructure of the ObitanChain App allows for simple hassle free usage of ObitanChain daily.

The ObitanChain Wallet-Linked Debit Card makes ObitanChain payment even easier by letting you pay with ObitanChain wherever a card payment point is available.

As the list of Businesses registered with ObitanChain grows larger over time Users will be able to spend their ObitanChain directly at a range of Businesses and store making ObitanChain a truly usage centric Cryptocurrency.

2- ObitanChain' Features

ObitanChain is a feature rich Cryptocurrency that can function on its own, even without the support and infrastructure of the ObitanChain App.

2.1- Security



Security has been a hot topic of discussion when it comes to Cryptocurrencies for a long time. The security of many Cryptocurrencies is being called into question due to the inherent dangers of the online world such as hacking attacks and data breaches.

The ObitanChain team has put our minds together and formed a security policy to prevent, deter, and eliminate the threat of external malicious attacks on our system.

We're all about dynamic security, there's no such thing as a 100% impenetrable system however we're doing our best to come awfully close with planned regular security updates and enhanced security measures.

Cryptocurrencies as a whole are on the forefront of online security and encryption. Cryptography is quite literally the study of secure communication and encryption. When it comes to the safety and security of our users we take no short cuts, keeping our user's private information private is one of our top priorities, and we've got the technology to make this possible.

2.2- Feasibility



One of the core elements incorporated in designing ObitanChain was feasibility and overall practical use.

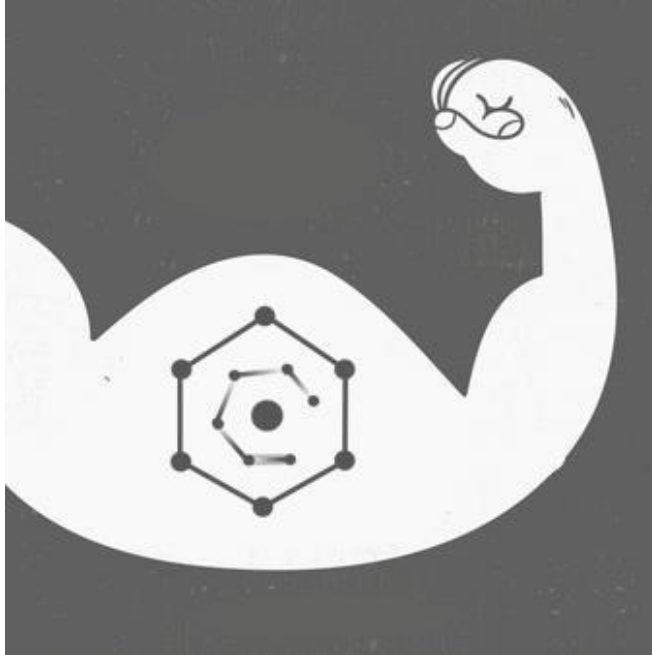
We want ObitanChain to be a beacon of success in the Cryptocurrency world and we're of the belief that all our users, big and small, are entitled to a share in the prosperity.

The ObitanChain App is a cornucopia of feasible features and usage for ObitanChain and as such will create a steady userbase that will guarantee the value of ObitanChain

To make this possible we've made sure that using ObitanChain makes not only practical sense, but Financial sense as well. It's well known that Mining is the most profitable Cryptocurrency activity, however for many pseudo-anonymous coins this is fast becoming untrue.

However mining ObitanChain is not only easy, affordable, and fair due to our egalitarian proof of work algorithm. But it's also private, when you mine ObitanChain you are truly mining a Cryptocurrency in every sense of the word, your identity and how much you mine are kept totally enigmatic from start to finish.

2.3- Sustainability



“Slow and steady wins the race” The tortoise said to the hare. ObitanChain hasn’t strayed far from this ancient proverb.

While ObitanChain are all about profit we also keep the concept of sustainability close to heart.

There can be no shortcuts to getting ObitanChain to the level we ultimately desire. That’s why ObitanChain and the ObitanChain App were designed for the long run, incorporating measures to make sure that both can withstand the test of time, and build a large user base with a dynamic network that’s always adapting along with it’s users.

2.4- Speed



Speed is an often touched on point by many Cryptocurrencies, and rightfully so, having a fast network works wonders, especially in the complex world of Cryptocurrency.

Our team has devoted a good portion of our time to make sure that our Network is as fast as possible. From transaction speed to Wallet syncing we've optimized every angle to get it running as fast as it should, and it's an ongoing process!

The inclusion of External miners into the ObitanChain Network will provide a massive boost in speed and functionality for both ObitanChain and ObitanChain.

We're constantly devising new ways to save our users even more time and add to the convenience factor of our currency. Nothing is more frustrating than waiting hours for a Transaction to be processed or a function to work.

To us, speed isn't a luxury, it's a necessity. After all, Time is money!

3- ObitanChains' Technology

As the next generation IoT network technical architecture based on Internet of Value, ObitanChain applies a unique OBITANIZATION algorithm to meet the requirements of the blossoming IoT industry. The inspiration for the OBITANIZATION algorithm comes from the formation of ions. In inorganic chemistry, when salt is ionized, it produces anions and cations, which can be combined again to produce new substances. Similarly, the OBITANIZATION algorithm separates two core functions of value creation and value transfer on the blockchain. New business models will occur after combining through and separating the value creation layer, value transfer layer and other IoT relevant features.

Under the current blockchain technical architecture, value creation and transfer are combined, which has great practical value in certain instances and this value will increase in time. The success of Bitcoin and Ethereum is the best evidence for this kind of algorithm. However, these algorithms are no longer suitable for the future requirements in the IoT industry. At ObitanChain, we think of every device as if it were a mining machine. Every IoT device in ObitanChain will play the role of a mining machine, and they will constantly create value. However all of the features of devices and values created are varied according to device and function.

The requirements of ObitanChain cannot be secured if we continue to follow the existing protocol which is a combination between value creation and value transfer in the blockchain. Hence the OBITANIZATION algorithm was developed for ObitanChain, and the *raison d'être* for this algorithm is to separate value creation and value transfer.

After the separation has been made, the facet of value creation is responsible solely for creating the value. With regards to differing devices, those corresponding algorithm will be tailored so that they can meet the diverse requirements demanded by IoT devices. IoT device to become a new consensus algorithm and create uniform value according to the ObitanChain standard, supported by a uniform consensus algorithm layer.

Following on from this, the value transfer layer can focus on transferring value in the ObitanChain system. All components of ObitanChain can exchange their value freely through the value transfer layer.

3.1 Value transfer in ObitanChain

The value transfer part of the ion chain is divided into six layers in the system architecture. The six layers are the application layer, service layer, protocol layer, smart contract layer, blockchain layer and data storage layer.

3.1.1 Application layer

Application layer is the user interface layer of the ObitanChain. It provides REST API interfaces based on the HTTP protocol. The devices can request access to ObitanChain through this layer. ObitanChain interface provides anti-counterfeit verification function of both the IoT devices and the vendors. The application layer of the ObitanChain adopts the plug-in function to make it more convenient to connect new businesses. At the initial stage of the system development, the system will include the following built-in services: data validation, vendor search, device registration, wallet and so on.

3.1.2 Service layer

ObitanChain extracts the service layer from the internal modules of the system. The ObitanChain contains many components, and all of them provide external interfaces through the server. The interface used by the service layer is generally a program other than the end user. Therefore, the service layer interface adopts the binary-based GPRC protocol. The service layer is currently available only for the internal components. In the future, we will consider to make the service layer available also for the core nodes.

3.1.3 Protocol layer

ObitanChain provides a unified access protocol at the protocol layer, including consensus protocol, network protocol, currency swap protocol, and so on. ObitanChain provides external services through a unified protocol. In the future development of the ObitanChain platform, the ObitanChain protocol will be a common protocol for all third-party applications.

3.1.4 Smart contract layer

Smart contracts are an important part of the ObitanChain. They are the bridges connecting blockchain layer with the applications. At the same time, smart contracts also play the role of adhesives, allowing to bind user requirements and blockchain consensus algorithms together. They make sure that users can legally and safely use the data stored on the blockchain in order to create added value. The smart contract layer consists of two parts: contract management and contract interface. Contract management is responsible for the deployment, installation, debugging, running and other operations of a smart contract. Smart contract interface is provided for external systems. The ObitanChain provides a set of system contracts for system-related operations.

3.1.5 Blockchain layer

The blockchain layer is the core of ObitanChain, and consensus algorithm is the most important part of the blockchain layer. According to the features of IoT network, ObitanChain applies fundamental components of graphene technology and makes depth optimization. Based on DPoS algorithm, the graphene technology provides serials of general blockchain components, including network, block, link, wallet, and of course DPoS algorithm.

3.1.6 Data storage layer

ObitanChain provides two ways to store data on the blockchain, which are based on IPFS and BigChainDB.

IPFS is an emerging standard for storing content addressable files. Content-addressable storage is a mechanism for storing information that can be retrieved based on its content rather than its location. Stated another way, all files stored using IPFS are given names derived from the hash of their content.

What this means is that the same file will have the same name on every computer, and the contents of that file can never change without also changing the name of the file. It also means that when you download a file from a server you can verify that it is the exact file you requested by recalculating the name based on the content provided by the server.

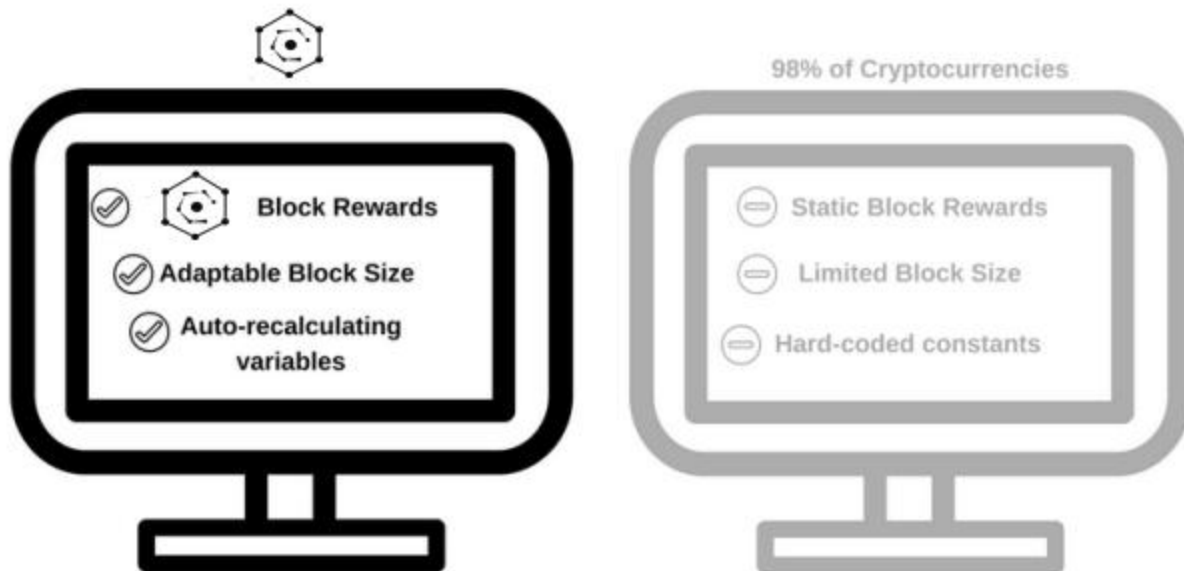
IPFS also provides a peer to peer (P2P) network layer that allows computers to discover and share files based on their deterministic names. However, this P2P network layer does not provide or guarantee storage, hosting, or bandwidth. As it is currently structured, the IPFS network expects users to provide their own servers and related infrastructure.

3.2- Adaptive parameters

The ObitanChain team believes that for a currency to be viable, it must not depend on a single person, or a small group of peoples' decision (Someone tell the fiat currencies!).

Bulky Hard-coded constants and magic numbers present in the code of most Cryptocurrencies act as an inhibiting factor for their growth, stability, and overall functionality.

Our solution is to incorporate dynamic, auto-recalculating variables in place of these constants to provide a platform for a currency that improves alongside it's users.



Almost every crucial limit from Block size to Block Reward is fully adaptive and reactive. Each ObitanChain Block recalculates difficulty using an algorithm that adds the sum of the work done in the previous 720 blocks and divides it by the amount of time used to solve them, while cutting off 20% of the outliers in the data set.

As for our Block size, we employ an algorithm that prevents a bloated inconsistent blockchain, but yet still doesn't apply a "Hard Limit" onto blocks, allowing for steady growth of blocksize overtime as the network grows and needs to meet the demands of more users.

Conclusion:

While many Cryptocurrencies exist on the market today, ObitanChain will stand out as a unique blend of feature and framework incorporating advanced Edge computing technology and being anchored by the expansive and dynamic ObitanChain App.

Looking over ObitanChain as a whole it's plain to see that we're equipped for success.

We've got the technology, human resources, and motive to mould the ObitanChain into a Cryptocurrency to rival all others.

- We've taken a brief look into ObitanChain's usability, how ObitanChain can and will be used across a multitude of platforms and for a plethora of different reasons.
- We've explored the base features of ObitanChain and the beliefs that hold it together at its core and sets ObitanChain apart from the rest of the pack.
- And we've had an overview of the Technology that allows ObitanChain to deliver on all its features and functionalities.

By now I'm sure you agree that ObitanChain and ObitanChain together make a genuine recipe for success, in fact we've already started Cooking!

Special thanks to the team for making their technology open-source and adaptable to our ObitanChain's needs. We hope that you continue to grow and prosper.