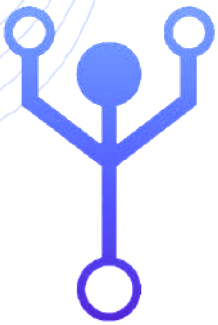

ILCOIN

ILCOIN Whitepaper

ILCOIN Development Team March 2020

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What is the ILCOIN Blockchain

> ***We need things that draw on the revolution of Bitcoin but Bitcoin alone is not good enough.***
>
> - Bill Gates

The Blockchain is a revolutionary on-chain data storage system using POW/C2P consensus; developed not only to provide a strong foundation for the cryptocurrency, but also to open up a wide range of possibilities for exceptionally safe yet transparent data storage, establishment of various smart contract systems and the launch of innovative decentralized applications running on our blockchain systems.

What started as an alternative to Bitcoin (BTC), today, has built its own unique blockchain network. Our blockchain network is a revolutionary Decentralized Cloud Blockchain System where on-chain data storage is secured by a quantum resistant SHA-256 Command Chain Protocol (C2P) and managed by a framework utilizing asynchronization called the RIFT Protocol. The Blockchain System has not only effectively future-proofed itself against impending threats of quantum computing, but also is proven to be completely immune to malicious, third-party 51% attacks.

Introduction – Defensive Blockchain Approach

Know the base which helps you build your future!

Transparency has no value without sufficient security. Theft of information causes the same level of problems as its counterpart forgery. We are convinced the long-term value of cryptocurrencies is fundamentally based on security technologies and advancements. When developing the ILCOIN Blockchain System, and all of our other developments, we made a strong commitment to placing maximum emphasis on security first. This is the starting point of our Defensive Blockchain Approach.

The Defensive Blockchain Approach of the ILCOIN Blockchain is our prerequisite for secure and safe data storage. Systems without security protocols cannot provide a safe and high-quality service for their users. This requirement motivated us to address the issue of security before aiming to solve any other problems.

The History

When ILCOIN was first created, it was merely a simple cryptocurrency with its own SHA-256 blockchain. At the time, it appeared the best place to begin innovation was with the most tied and tested cryptocurrency on the market: Bitcoin. The code for Bitcoin was used as the basis for ILCOIN in 2014, and from there, small changes to the code continued throughout the years. In the beginning of 2019, ILCOIN had outgrown the original code it had borrowed as the basis for its growth. The code was rebuilt from the ground up with security and expandability as the forefront of the development. Upon completing the redesign of the code, ILCOIN had become the most secure and most flexibly expansive cryptocurrency on the market; and remains so to this day.

In the next 30 years, 90% of all companies will do their business online.

- JACK MA, Founder of alibaba.com

The Company

The ILCOIN Blockchain was launched and is mined by the ILCOIN Development Team: a dynamic start-up company committed to building, developing and maintaining the most innovative and secure global digital currency-based economic system and community. With prolonged, experienced programming knowledge for each of our representatives, we are resolved to achieve improvements in this cutting-edge technology which is the cryptocurrency world. Every day, we endeavour to bring more numerous and improved assets for our users. We are always looking for ways to update our technology with better security and connectivity for our wallets so that we may remain current with the latest technology; providing the best experience possible for our users. Our support centre is always available to assist users with the use of our products and to answer any questions that may arise. We also have tutorials to help you feel more comfortable and confident when interacting with our blockchain.

The Goal for the ILCOIN Blockchain

The ILCOIN project aims to create a blockchain platform that provides its users with the opportunity to achieve their long-term business goals safely. Going way past the cryptocurrency's basic functionalities, we are continuously working on opportunities that – with the help of ILCOIN – allow us to achieve a much broader and more fulfilling usage of blockchain technology.

Thanks to the centralized nature of ILCOIN mining, developmental work on the blockchain, the wallet and the explorer is a continuous effort kept under tight control. Our mission is to develop a revolutionary Decentralized Hybrid Blockchain System while having ILCOIN as a stable, safe and widely accepted payment method behind it.

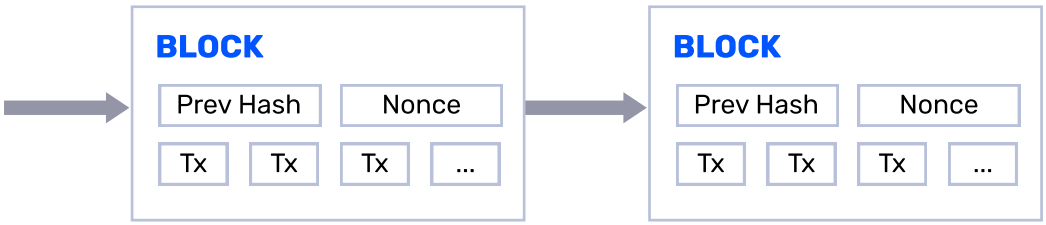
Technical info

This is why you can trust ILCOIN.

Proof of Work/Command Chain Protocol (POW/C2P)

Command Chain Protocol (C2P) was created by the ILCOIN Development Team and was released in 2019. C2P is a blockchain security protocol which may be integrated into different types of blockchains to create new consensus algorithms. For example, the ILCOIN Proof-of-Work (PoW) blockchain which integrated C2P became the first PoW/C2P consensus algorithm. The main function of C2P is to prevent a 51% attack of the blockchain; internal attacks and external attacks both.

C2P operates by utilizing a 3-tier system of full nodes. Each level of full nodes communicates with the other two levels to forge each mined block. At the base, the normal full nodes help to generate transactions and synchronize with the entire network. Once the transactions have been generated, they are shown to the next level of full nodes, the validator nodes.



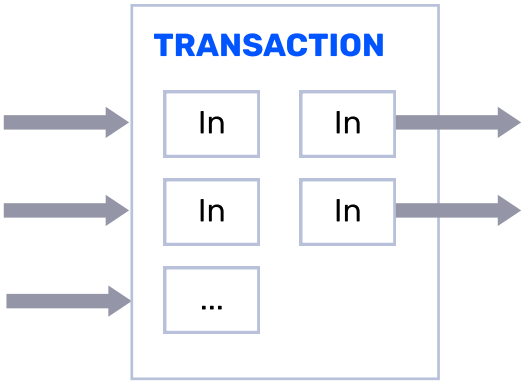
The validator nodes work by verifying the validity of each transaction, then cross-referencing transactions with a list of blocked wallets. Once the transactions have been verified, they are given to the third and final tier, the admiral nodes (master nodes).

Admiral nodes provide signatures for each block which are created based upon timestamps, the previous block's signature and other unannounced factors. Due to these varying factors, each admiral node's signature is unique for every block.

Due to the validator nodes' ability to block wallets, malicious wallets which have been involved in attacks may be neutralized. This neutralization prevents coins proven to be involved in illegal activities from being moved from any wallet on the list of blocked wallets.

Combining and Splitting Value

Although it can be possible to handle coins individually, it would be unwieldy to make a separate transaction for every cent in a transfer. To allow value to be split and combined, transactions contain multiple inputs and outputs. Normally, there will be either a single input from a larger previous transaction or multiple inputs combining smaller amounts and at most two outputs: one for the payment and one for returning the change, if any, back to the sender.



It should be noted that fan-out (where a transaction depends on several transactions and those transactions depend on many more) is not a problem here. There is no need to extract a complete stand-alone copy of a transaction's history.

RIFT Protocol

The RIFT Protocol defines a second blockchain layer that is called “Mini-Blocks”. This new second blockchain layer allows the creation of mini-blocks which are not mined. These mini-blocks are capable of holding up to 25 MB of information each and must be referenced to a mined block through a complex system of hashes. Mined parent blocks include references to mini-blocks, and mini-blocks include references to transactions. However, mini-blocks are not mined but automatically generated, resulting in a separate block that can reflect the same way fractals replicate. Due to this replication, coupled with the fact that mini-blocks sync to the chain asynchronously from the parent block, the scalability of the network is unlimited. Thanks to the capability of asynchronization; the RIFT Protocol also solves both the First-In-First-Out FIFO and the Bottleneck problems. At the moment, the RIFT Protocol allows for up to 200 Mini-Blocks per mined block; totalling 5 GB of information per mined block.

Traditional blocks in a blockchain are built by calling an RPC function that returns the template of the Block in JSON format and includes an array of transactions pending confirmation. According to the source code rules, consensus, and policies, it returns as many transactions as possible ordering the Memory Pool by the Fee Rate. RIFT Protocol now adds two new RPC functions: RPC blockprotocol and RPC mini-block protocol.

RPC Blockprotocol

1) Returns the template of the RIFT’s network block.
2) Does not include the transactions but includes an empty array to fill later with mini-block hashes.
3) This block is the parent of the mini-blocks.

RPC Mini-Block Protocol

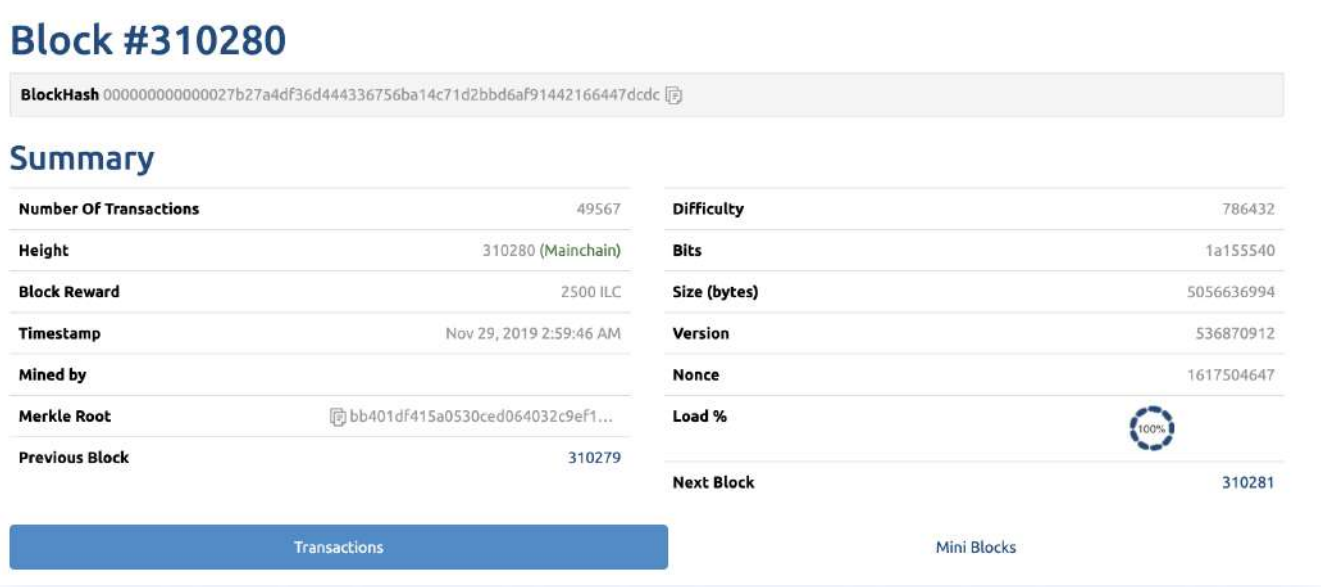
1) Returns the template of the RIFT's network mini-block.

2) Receives a parameter indicating the index to start getting transactions.

3) Includes as a return the index of the last transaction in the mini-block, this way the mining pool software will know where to start the index of the next call.

4) Order the list of transactions of the memory pool by the entry time. This is when the transaction has arrived at the memory pool. This differs from traditional parent blocks that order the memory pool list of transactions by the fee rate. This is also to avoid double including transactions and leaving transactions behind while building the mini-blocks.

On Nov 28, 2019 at 7:59:46 PM, block number 310280 was mined on the live ILCOIN network. This block contained 5056636994 bytes of information; proving the blocks are capable of storing 5 GB of information.



https://ilcoinexplorer.com/block/000000000000027b27a4df36d444336756ba14c71d2bbd6af91442166447dcdc

Due to the quick block forging time on the ILCOIN live network (3 – 5 minutes average), it became necessary to fill the block space in another way since not even the most advanced cryptocurrencies to date have the need for such a large block using only transactions and not data storage. The block was filled using transactions generated by the ILCOIN Development Team and mined as proof of the RIFT Protocol's capability to store information on-chain.

Decentralized Cloud Blockchain (DCB)

Decentralized Cloud Blockchain (DCB) is a software based on the RIFT Protocol that will give the capability to have a fully encrypted environment through the mini-blocks. Once fully developed, the process will follow the following steps:

1) User selects a file to upload, introduces the desired encryption depth level, and introduces an encryption password.
2) File is uploaded to the Cloud Explorer Software (CES). This software interacts with the DCB.
3) Once the file is uploaded to the server, it splits in accordance with the desired encryption depth level. The more times the data is split, the higher encryption depth level it will obtain.
4) Each fragment of the file is encrypted using the encryption password the user entered before.
5) CES requests to the DCB a new Main Hash reference to start the upload process.
6) The CES sends each piece of the files to the DCB through an API Communication.
7) The DCB API answers the call with a successful JSON response. If this answer is not valid, the CES may try again.
8) Once all the pieces of the file are sent, the uploading process finalizes.
9) All the hashes of the pieces of the file and the Main Hash together generate an input that will be recorded in one of the parent blocks (PoW block, first layer).
10) All the pieces of the file are peer-to-peer to the DCB nodes and are added to the memory pool.
11) The mining pool software reads the pending files that still need confirmation and generates a mini-block for each piece of the file. It places as many pieces of the files as possible inside them with a size limit per mini-block of 25 MB (from different main files).
12) Once a parent block is mined with its mini-blocks, the process is completed.

Network

Understanding how the network operates in a Proof-of-Work algorithm can help lead to a better understanding of the blockchain in its entirety. Please keep in mind, these rules for networking a POW algorithm have been altered with C2P. For security reasons, the details of those alterations will not be listed.

The steps to run the network are as follows:

1) New transactions are broadcast to all nodes.
2) Each node collects new transactions into a block.
3) Each node works on finding a difficult Proof-of-Work for its block.
4) When a node finds a Proof-of-Work, it broadcasts the block to all nodes.
5) Nodes accept the block only if all transactions in it are valid and not already spent.
6) Nodes express their acceptance of the block by working on creating the next block in the chain, using the hash of the accepted block as the previous hash.

Nodes always consider the longest chain to be the correct one and will keep working on extending it. If two nodes broadcast different versions of the next block simultaneously, some nodes may receive one or the other first. In that case, they work on the first one they received, but save the other branch in case it becomes longer. The tie will be broken when the next Proof-of-Work is found and one branch becomes longer; the nodes that were working on the other branch will then switch to the longer one. New transaction broadcasts do not necessarily need to reach all nodes. As long as they reach many nodes, they will get into a block before long. Block broadcasts are also tolerant of dropped messages. If a node does not receive a block, it will request it when it receives the next block and realizes it missed one.

Utilization Areas

Command Chain Protocol (C2P)

Command Chain Protocol (C2P) was created in order to prevent one of the biggest concerns in the crypto world "the 51% attack to the network." As the name suggests, we have a set of rules and policies carved into the source code which allow or block different types of activities. This also helps us to prevent any blockchain corruption like the double spending issue and prepares our chain for having safer and stable smart contracts. Implementation of the 3 levels of security creates a safe environment for the user. Beginning with a solid SHA-256, we applied a security layer so no one can double spend, roll back, or corrupt the network. What is more, with these 3 levels we spread the stress of the network by giving different tasks to complete to every full node. Therefore, our chain can be more stable, stronger and faster.

C2P is the next step for security in the cryptocurrency world in order to reject the unethical hackers who, for example, attempt to take advantage of back doors by way of faulty codes or by overpowering a lesser hashing power; those who, at the same time, end up hurting a specific cryptocurrency and consequently the trust of this entire new market.

In C2P, every block not only contains the hash of the last block but also contains a set of certificates which the nodes can read in order to double or even triple check the origin of the block and inputs. This way, it determines if that container is a valid or a corrupt one. With the latter, that block and its inputs will be rejected from the entire network. This new protocol prevents the 51% attack with its unique certificate stamp in every block since only non-malicious nodes can deliver that certificate. In addition to this, it has consequently, implemented a unique blocking mechanism which prevents the theft of coins or the spending of lost coins in case a user loses their wallet or control thereof. C2P is a unique asset of ILCOIN, and with these new security additions, has made ILCOIN the most secure coin to have ever existed.

RIFT Protocol

The RIFT Protocol is the future of the blockchain. In fact, it is an advanced evolution of it. This improvement completely solves the problem of block size and network limitations. The Bitcoin blockchain currently has a default size limit of 1 MB per block and the Bitcoin Cash (a crypto formed from a Bitcoin hard-fork) has a 32 MB limit. These limits do not support the actual nor the near-future service demands of Bitcoin or any similar cryptocurrency.

Imagine in the near future when all people are using digital cash systems with all the boundaries of Bitcoin: PoW, SHA256, Peer-to-Peer, Decentralized. What will happen when there are hundreds of thousands or millions of transactions occurring all around the world in a short period of time? The Bitcoin network will fail to accommodate. There will be more and more pending transactions because a mined block cannot confirm more than approximately 32 MB (Bitcoin Cash) or 1 MB (Bitcoin) of transaction data.

If the growth and recognition of cryptocurrencies continues to increase, cryptocurrencies will become the money of the future. The scalability problem of cryptocurrency must be solved before the ubiquity of cryptocurrency can become the norm. If not, each cryptocurrency currently facing a scaling limitation will realize a decline in its importance.

Any cryptocurrency that uses a technology which solves the scalability issue will become the more sought-after choice for its usability and transaction volume. These will become the cryptocurrencies that survive. They will have the capability to confirm as many unconfirmed transactions as are in the cloud memory pool.

Decentralized Cloud Blockchain (DCB)

Decentralized Cloud Blockchain (DCB) is a software based on the RIFT Protocol that gives the capability to have a fully encrypted environment through the mini-blocks. You will be able to store different versions of any media such as big files, videos, images, text, databases, etc., basically any file that you want to store. We will also have the capability to track versions of files; keeping a record of the historical changes. All this in a complete decentralized autonomous system, cloud based, peer to peer, SHA-256 and PoW.

Currently, it is very difficult to say anything with certainty about the effects blockchain technology will have in the following decades. Even though the revolution has just begun, it is already clear that decentralized data storage is, in fact, the future. The following examples only give a general illustration of the utilization opportunities that reside in the potential of DCB technology:

1) transparent social media platforms where users will retain the exclusive ownership of the data they upload, and they will also be provided with the opportunity to sell their data through an internal trading system
2) sales support relating to inventions where complete patent rights transparency is ensured by the blockchain and the use of smart contracts
3) secure storage and/or consensual sale of data while simultaneously eliminating the possibility of falsifying the data
4) blockchain-based escrow service where parties have the opportunity to assign complete business-related documents to the smart contract
5) constructing transparent media interfaces while eliminating the possibility of anonymously falsifying news
6) designing auction interfaces with the support of the blockchain and smart contracts
7) the registry of futures trading on the blockchain with smart contract support
8) blockchain-based registry of traffic data which could form the basis for the development of an efficient AI system
9) blockchain-based support for global commodity trading systems, by which the authenticity of any transaction is ensured
10) development of digital library systems with a community-based approach where accessing data will be available for everyone and, in addition, the identity of the data owner is defined and cannot be falsified
11) blockchain-based storage of results that are related to scientific researches
12) data storage relating to corporate governance systems
13) the potential for a decentralized Internet with the utilization of blockchain
14) the registry of health and social security data
15) the transparency of security and stock market trading with smart contract system support
16) …as well as many other possibilities

While taking free usage opportunities into consideration, we aim to create a platform where all users can find their own business, private, or community goals. The DCB is a tool through which everyone has the possibility to realize their own objectives.

ILCOIN Cryptocurrency

ILCOIN, the cryptocurrency mined by the ILCOIN Blockchain, provides a stable, operational and financial basis for the entire blockchain platform. This basis carries opportunities that cannot be solved by a traditional financial approach thanks to the C2P and RIFT technologies. Therefore, ILCOIN plays a very important part of increasing partners' willingness to cooperate.

ILCOIN can be safely stored in wallets built for the cloud, Android, OSX and PC. Also, it can be transferred directly to anyone instantly at virtually no cost - without banks, without chargebacks. ILCOIN users can monitor their transactions through our own block explorer. ILCOIN is listed and freely traded on several cryptocurrency exchanges.

We are committed to place ILCOIN among the 10 most utilized cryptocurrencies in the world.

Future Plans and Developments

> ***ILCOIN will be able to provide these innovative services to its users.***

Smart Contracts

During the development of DCB technology, our main objective was to create a platform that is adaptive and can be widely adopted. The platform's adaptive nature is derived from the most widely accepted and best-known programming language on the market, i.e., the Solidity programming language that smart contracts are built on. The reason behind ILCOIN developers opting for this solution is the fact that the most significant, most prominent blockchain developments are all based on Solidity; making our smart contract systems related to the DCB technology easily adaptable for systems like Microsoft Azure or SAP.

The objective of the ILCOIN Blockchain Project is not only to provide its own users with a service opportunity on the DCB platform, but also to deliver the possibility to anyone to build their own DCB-based businesses with the help of the DCB and its related modular smart contract system.

Tokens detailed in the Business Paper and the system-related smart contracts will provide a solid foundation for this. As the DCB is a decentralized technology, anyone may build their own system by utilizing the extraordinary capabilities of the platform such as the RIFT Protocol and modular smart contracts.

Command Chain Consensus Protocol (C3P)

Can any blockchain system be even more safe and secure? At the ILCOIN Development Team, we have no doubt that the answer is, "yes!" Our Team is committed to continuous development of our blockchain technology, and we are constantly working on improving ILCOIN's Defensive Blockchain System. Command Consensus Chain Protocol (C3P) is C2P's next upgrade which places a special emphasis on transforming the current state of the blockchain - which possesses decentralized defensive systems - into a safe, secure structure. With C3P, structured consensus theory becomes a reality while providing a high level of security to eliminate possible attacks.

Conclusion

The spread of cryptocurrency and blockchain technology has been rapidly increasing over the past couple of years. Several projects have promised exceptional breakthroughs in blockchain utilization, but facts suggest that truly outstanding achievements have yet to be implemented. Based on current trends, tokenization and off-chain approaches have become the most widespread adoptions of these technologies. However, people may have mixed feelings as neither tokenization nor the off-chain approach have brought about a level of success that would dignify Satoshi Nakamoto's vision.

The problem is primarily connected to overcoming developmental difficulties. The vast majority of the projects that start out with tokenization never actually get to the point of developing their own systems. The innovative solutions of leading technological companies are partially incomplete and limited in terms of the widespread usage possibilities of their respective blockchains. There is, indeed, demand for decentralized applications on the market. Yet, the market continues to experience difficulties with security and stability, and has been able to produce very few breakthrough results in the practical utilization of cryptocurrency.

The strategic, developmental approach of the ILCOIN Development Team is entirely different from the traditionally accepted projects that merely seek popularity. Commitment to technological innovation fundamentally implicates the project's perspective where the significance of long-term objectives is indispensable. An approach that places direct emphasis on safety and efficiency will result in a blockchain project where the dependence on external factors can be minimized. The value of stability creates a community where ILCOIN owners are committed to supporting developmental productivity while ignoring short-term, relative gains delivered by speculative results.

The development team behind the ILCOIN Blockchain Project has uniquely defined an objective where the primary value of ILCOIN (SHA-256, PoW) is becoming expressed in the utilization opportunities of the blockchain technology itself. In other words, the ultimate goal is the creation of a system where real-world usage, backed

by security and stability, will create an environment which generates its own intrinsic value that could be reflected in its associated cryptocurrency. These real-world, legitimate uses such as with on-chain based data storage as well as the associated smart contract system can represent stable business utilization for those who possess ILCOIN. With this approach, ILCOIN's level of importance will alter, and by forgoing short-term speculative objectives, the project will realize a revolutionary crypto-utilization that is not yet available with any other competitor on the market.

The hybrid decentralized approach offers users a secure utilization of ILCOIN. The Command Chain Protocol (C2P) and the RIFT Protocol together form the basis of the ILCOIN Blockchain System that the Decentralized Cloud Blockchain (DCB) can be built and be operated upon. Our Decentralized Cloud Blockchain will become the first project in the world to provide a solution to on-chain based data storage. This technology of the future suggests that data storage will be imminently integrated primarily on a blockchain basis.

The Decentralized Cloud Blockchain is a platform where all partners have the opportunity to store their data safely through an easily accessible system. The safety of the data connecting to the platform is being guaranteed by our secure, decentralized blockchain network that is running the ILCOIN blockchain. The Partner Node System - created for data management - is being provided by ILCOIN's mining and will ensure cost-efficiency by enabling us to utilize our mining process for multiple functions. The ILCOIN cryptocurrency is the basis of the ILCOIN Network: the world's most capable on-chain data storage system.

Uniform access to sync nodes will offer the chance for everyone who wishes to join ILCOIN's network to do so. Anyone may enjoy business and economic benefits delivered by the world's first cryptocurrency with a defensive approach. Owing to the decentralized on-chain based data storage coupled with the most advanced blockchain security to date, ILCOIN receives the opportunity to remove itself from today's speculative environment and create a value that Bitcoin once represented when blockchain technology was born.

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