Innova
WHITEPAPER

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Abstract

At the moment the cryptocurrency market is in a constant state of change, growing as more companies get involved and industries are penetrated. These companies look to explore the new potentials of Blockchain Technology. With the financial space still in its first steps toward integration with cryptocurrencies and the trading environment still in its early phases, a majority of coins are in a constant state of ambiguous technical development and thus suffer from market volatility. As a result, established trading houses are not an option until a compromise has been reached. During recent years many cryptocurrencies have lost more than 99% of their value, thus weeding out those projects based upon fake promises of goals that will never come to fruition. The remaining projects, the ones most likely to truly recover in the upcoming cycle, are the ones with anchored ecosystems and functioning use cases.

Our Mission and Vision

Due to the knowledge that the market is moving at an extremely high pace and is in a constant state of change, the Innova team has made it imperative to ensure that Innova Coin is being continually developed in order to maintain the quality of Innova as well as remain adaptable to new demands to increase the spread of Innova.

Our aim is to make Innova Coin a leading cryptocurrency in the market by creating a solid ecosystem for Innova. This aim includes making use of the MNSimple Platform and the E-Commerce plugin which opens many doors for mainstream use of Innova. We want to implement a high-functioning stealth transaction system for Commercial use that will provide a nigh instantaneous transfer of funds and that has a reliable layer of protection not only for the sender but for the receiver as well.

Introduction

The ingenious Satoshi Nakamoto released Bitcoin in 2009 with the aim to showcase blockchain technology as well as illustrate the ability to solve many of the issues the modern financial system currently faces. As stated in his Bitcoin Whitepaper, "What is needed is an electronic payment system based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party" (Bitcoin: A Peer-to-Peer Electronic Cash System pg. 1). Nakamoto's aim was to bring an alternative option to the table other than trust-based systems that utilize financial institutions (third parties) to process the transaction.

Although the technology has succeeded in providing this option has not yet been adopted as a standard medium of payment, the cryptocurrency market has still flourished. There are many vendors and businesses that accept Bitcoin and other cryptocurrencies as payment but our goal here at Innova is to bring the cryptocurrency payment method to a standard across the web. Along with the standardization issue there are internal problems within many coins that take the place of high circulation problems. Due to the constant release of coins, many of them lacking in true purpose, many cryptocurrencies face a supply and demand issue where the supply constantly outweighs the demand. Innova Coin is set to combat this with its Blockchain Model. We have chosen a Hybrid solution which incorporates a small Proof-of-Work Phase which will run alongside Proof-of-Stake and will transforms into a Full Proof-of-Stake solution. The reward structure -stated below- will help combat the constant supply over demand issues as well as give Innova a higher level of security than any Proof-of-Work only blockchain.

Blockchain Model (Hybrid + Fortuna Stakes)

Our Blockchain Model is a Hybrid Proof-of-Work/Proof-of-Stake Tribus Algorithm. This model ensures constant high-speed block as even when the Proof-of-Work difficulty goes up significantly, the Proof-of-Stake miners can still process the block, as they will always have a much lower difficulty, which ensures block times remain ~15 seconds.

Innova uses a modified Masternode system called Fortuna Stake. This modified system looks to solve the problem the traditional Masternode system has regarding centralization and non-random rewards system, which pays out based on the first user to start a Masternode. Instead, Fortuna Stake uses a Decentralized Fair Payment System (dFPS), which ensures fair payments. Once the Fortuna Stake is started it goes into a Registered state within the Fortuna Stake list and awaits one full round of payments to the existing Fortuna Stakes. One full round is equal to how many Fortuna Stakes are active on the chain (Example - 100 Fortuna Stakes in the Active state means it will take 100 blocks before one full round has finished). Once the round ends the Fortuna Stake will change from the Active state to the Active for Payment state, and will be eligible to begin receiving payments in the current round. Every time a payment is made, and checked, to a Fortuna Stake the node searches to find average payment in the blockchain's history.

The dFPS system then ranks the Fortuna Stakes based on how much they have been paid compared to the other Fortuna Stakes. If any Fortuna Stake receives a payment that is higher than average the block will be rejected by the network, which occurs when the block does not get validated or accepted into the blockchain.

Our Hybrid Chain consists of two Phases, one of which is the Hybrid PoW/PoS phase while phase two is a full Proof-of-Stake phase. The Hybrid Phase will have a length of 50,000 blocks, and during this phase any Proof-of-Stake rewards paid will be taken from transaction fees collected from the memory pool. The Full Proof-of-Stake Phase will see the Proof-of-Work mining shutdown and the Proof-of-Stake reward changed to a static 6% APR (Annual Percentage Rate) on top of the transaction fees from the memory pool. Once the max supply of 25 million has been reached the validators will still collect the transaction fees from the memory pool, encouraging a large number of wallets remain online.

The Pre-Mine allocation of 10.35 million coins was intended to cover the Swap Phase that required 8.1 million Innova. Once the Swap has concluded we will burn the remaining coins. The remaining 2.25 million will be distributed among the team for Innova Development. This includes but is not limited to: any services Innova is on, chain development, Innova tool development, and bot development.

Hybrid Phase

- Proof-of-Stake: Transaction Fees collected from the memory pool
- Proof-of-Work:

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Blocks 1 - 490 (Fair Block Launch)	0.0825 Coins
Blocks 491 - 5000	0.33 Coins
Blocks 5001 to 10000	0.66 Coins
Blocks 10001 to 15000	0.99 Coins
Blocks 15001 to 20000	1.32 Coins
Blocks 20001 to 25000	1.65 Coins
Blocks 25001 to 27500	1.485 coins
Blocks 27501 to 30000	1.32 Coins
Blocks 30001 to 32500	1.155 Coins
Blocks 32501 to 35000	0.99 Coins
Blocks 35001 to 37500	0.825 Coins
Blocks 37501 to 40000	0.66 Coins
Blocks 40001 to 42500	0.495 Coins
Blocks 45001 to 47500	0.165 Coins
Blocks 47501 to 50000	0.0825 Coins

Full Proof-of-Stake Phase:

- Proof-of-Stake: 6% APR
- Proof-of-Work: Shutdown

Fortuna Stake - Collateral:

- 25,000 INN
- 65% of the Block Reward

What are Cryptocurrencies?

Cryptocurrencies are a digital asset which can be used as a store of value or a medium of exchange. These assets utilize one of many extremely powerful cryptographic algorithms to secure transactions of the asset, control the creation of addition units of said asset, verify and transfer the assets, and more, depending on the technology. These networks are called Blockchains which are typically decentralized ledgers of information that serve as public databases. These Blockchains are designed to be resistant to any alteration of the data recorded within the ledger, comprised of records known as blocks. Linked together the blocks form a blockchain which can be traced from the moment of initiation to the most recent block which can be seen with a chain of hashes produced by the cryptographic algorithm. Since it is a distributed and open ledger, once the data has been written and distributed it cannot be changed retroactively. Bitcoin is the first example of Blockchain technology which utilizes the SHA-256 algorithm to secure the network and its functions.
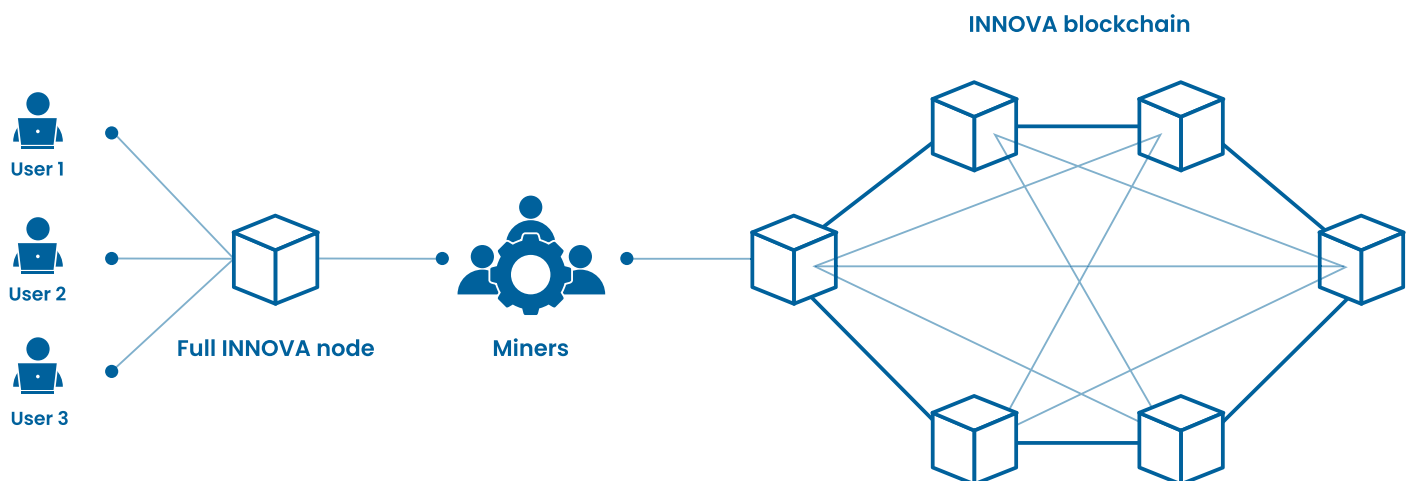
In the above diagram you can see what a Full Node is and how it affects the Blockchain. One item the Full Node handles is the broadcasting of transactions; it receives transactions from users and sends it out to other Full Nodes on the network to be included in the next possible block.

Nodes

The primary function of a node is to implement and enforce the blockchain parameters. In the case of Innova the nodes are enforcing the following rules:

- Transactions must have proper signatures from the Innova Coin to be spent.
- An output of the transaction within a single blockchain network can not be double spent.
- Blocks and the transactions within them contain the proper parameters such as rewards and fees.
- Verify and approve block data.

If a block or transaction violates the rules above, it will be rejected from the blockchain even if it has been found valid by other nodes on the network. Ensuring that the right thing is done no matter the circumstances is one of the security aspects of a blockchain and its nodes.

Fortuna Stakes

Fortuna Stakes function similarly to Masternodes, and, just like Masternodes they support the chain stability while also enforcing the chain parameters. This new system has major improvements on the traditional approach. Firstly, the Fortuna Stake system is made up of two running components: the stake which expands the network reach and support the blockchain and its health, as well as the Fortuna Protocol, which helps balance the income between stakeholders. Secondly is the unique payment system called dFPS (Decentralized Fair Payment System) which ensures fair payments to all. To give an example, if you started your Fortuna Stake at block 100 and there were 50 Fortuna Stakes on the network then your status would show "Registered" as it is registered in the Fortuna Stake list and awaits a full round of payments. One full round is equivalent to the number of Fortuna Stakes online (in this example this would be 50 blocks as 50 Fortuna Stakes are online). After the round has passed, the Fortuna Stake status will read "Active for Payment" and will be able to start receiving rewards. This system also ensures that no Fortuna Stake is getting paid above average, by scanning the previous blocks to find the average payment and if it is then the block is rejected by the network.

Third is the Payment Stabilization System which does not allow any stake's income to be in excess of 25% of the median payment rate (Example - If 1 INN every 100 blocks is the average then the protocol will reject any payments above 1.25 INN. If the payment on the other hand is below 0.75 INN then the system will assign more payments to attempt to balance the reward distribution). Fourth is a system called Ring Signatures, which aims to replace the more popular Darksend feature. Ring Signatures are a type of digital signature that can be performed by any member of a group of users who each hold a key. One of the security properties of a Ring Signature is that it should not be computationally feasible to find out which of the group members' keys were used to produce the signature.

A Ring Signature makes use of your account keys and a number of public keys (also known as outputs) pulled from the blockchain using a triangular distribution method. Over the course of time, past outputs could be used multiple times to form possible signer participants. In a "ring" of possible signers, all ring members are equal and valid. There is no way an outside observer can tell which of the possible signers in a signature group belongs to your account. In other words, ring signatures ensure that transaction outputs are untraceable. Moreover, there are no fungibility issues with Innova given that every transaction output has plausible deniability (the network can not tell which outputs are spent or unspent).

Fortuna Stake Rewards

Bitcoin relies heavily on Full Nodes to ensure the stability and security of the blockchain. Sadly, owners of Full Nodes on the Bitcoin Blockchain do not get rewarded for running the Full Node. Innova on the other hand has the modified Masternode system called Fortuna Stake which functions like a Full Node but the difference is that operators get rewarded. The Innova Fortuna Stake operators are rewarded 65% of the block reward while the miners are rewarded 35% of the block reward. The lack of incentive to run Full Nodes is why coins like Bitcoin and other similar cryptocurrencies see a gradual decline in number of Full Nodes that are supporting the network over time, but for Innova, as time goes by, the amount of Nodes will only increase.

Why Are Fortuna Stakes Good for Crypto?

The Fortuna Stakes Protocol adds a security that the blockchain will never suffer from the lack of Full Nodes to help support the chain and process transactions. Along with an investment incentive that pushes the Nodes' amount higher, which will in turn strengthen the network and the value, the low release of the Innova Assets and the high incentive to run a Fortuna Stake ensures the growth of Innova.

Difficulties Running a Fortuna Stake

In addition to the cost of the running a virtual server for the hosting of the Fortuna Stake, the operator must also have a minimum amount of Innova to qualify. For example, the Innova Fortuna Stake requires a minimum of 25,000 INN as collateral, and so operators must have at least this many INN. If the user has 50,000 INN they have the option to run two Fortuna Stakes. Even with the collateral and a virtual server there is also knowledge required in order to configure the server properly to allow the operation of your Fortuna Stake, as well at maintenance to ensure the Fortuna Stake is online 24/7.

The Innova Solution

Knowing the issues above, the Innova Core Team has focused on solving said issues in order to bring Innova and other Masternode Cryptocurrencies to the everyday user with an easy website platform and an all-in-one solution that even expands to other services, to ensure a holistic all in-house option. Our solution is called the MNSimple Platform, and on this platform we can offer easy setup for any Masternode Cryptocurrency. MNSimple aims to avoid the issues that have been present in other hosting options, with security in mind.

MNSimple Platform - Overview

Not Your Keys, Not Your Coins
MNSimple uses a unique hosting solution for Masternodes - once ordered you will receive the IP address of your virtual server along with a Masternode generation key and instructions on what to do locally to finish the procedure. This is to ensure the assets are never moved out of the customers' control and the customers always have the private keys for these coins. Once the instructions have been followed and the configuration is complete you can run your Node.

Low Cost
The MNSimple Platform aims to offer the lowest operating costs for hosting any Masternode, along with the option to pay for services in Innova and the top cryptocurrencies as well as standard FIAT payment options and if the services are paid with Innova there will be a discount on said services. MNSimple also aims to offer low costs for other dedicated server and cloud server needs.

VPS Hosting Service
MNSimple is also offering dedicated servers and cloud servers with a wide range of operating systems to choose from, depending on the user's needs. The team is also looking at offering preconfigured servers of online game hosting for games such as Minecraft.

Future Services
The MNSimple Platform has plans to expand to other services which will expose Innova to even more markets, which includes but is not limited to website hosting and blockchain services. Website hosting will offer a server, a domain, and the tools to build out your website with ease. Blockchain services will offer packages for coin creation and options for updates or fixes on blockchain sources.

Innova Coin

Innova Coin is a fast and unique blockchain which offers lightning fast blocks, Proof-of-Data, encrypted messaging, and full Proof-of-Stake. The Innova Team is actively attempting to bring Innova into new markets by offering services in these markets, offering competitive pricing and showcasing the Innova E-commerce plugin with these services. We hope to penetrate a new market and expand as needed to ensure Innova is a top cryptocurrency and maintains this status in the future. The low 6% APR reward system ensures a slow release of Innova on the market to balance supply and demand. With the features for merchant and consumer security and instant transactions we aim to make Innova available for usage in any market.

Why Choose Innova?

🔒 **Hybrid Algorithm** - With the security of both Proof-of-Work and Proof-of-Stake the Innova blockchain in not susceptible to attacks in its early stage while in the later Proof-of-Stake stage, the amount of coins in circulation, along with burned coins from the Swap, will ensure no one can accumulate enough mining power to attack and rewrite the chain.

🐱 **Fortuna Stakes** - The Fortuna Stake system further ensures a large amount of Innova coin will be locked in Fortuna Stake with even more to be locked for basic staking. Operators of Fortuna Stakes are rewarded with a 65% reward, confirming that even the operators of these nodes can not flood the market with Innova. With so many coins locked for mining, the supply available on the market at any given time is kept exceedingly low and thus establishes a solid growth of value in the future.

👤 **Made With Its Users in Mind** - Here at Innova we have our community at the forefront of our mind with an open mind to community suggestions for future features and growth options as well as a fully encrypted communication in-blockchain option for our users, that will be expanded into its own mobile messaging application. We believe that the internal communications within the community are important and therefore deserve to be private.

👁 **Stealth Addresses** - Stealth Addresses keep both customer and merchant secure

📡 **Proof-of-Data** - Proof-of-Data is a blockchain-based hashing and time stamp function that authenticates your file with a unique hash and timestamp on the Innova Blockchain, which can be checked by anyone, removing any third-party trust.

Features:

The Innova Blockchain has features that are targeted at solving issues of the adoption of cryptocurrencies into the mainstream market. These features include Stealth Addresses, Fast Blocks, which can move transactions very quickly, and a balanced release system for Innova, all of which are described below.

Stealth Addresses

Stealth Addresses prevent the possible public association of a transaction output with the receiver's wallet address. This would be useful for merchant and commercial use as this would allow said users to implement Innova as a payment option while also not revealing their customers, demographic, or the various transactions tied to the address. View diagram of [how stealth addresses work](#).

High Transactions per Second

Innova features a lighting fast ~15 seconds block time which currently offers 300 transactions per second, which is over 40 times faster than the leading Cryptocurrency Bitcoin. The work of the Innova Team is far from over as our target is a minimum of 2000 transactions per second, as to allow Innova to be used in many industries without said transactions being affected by the involvement of other industries.

Block Reward

The block reward for Innova is set to combat the supply and demand issues commonly seen in the blockchain communities. With a reserved release of Innova into the public's hand, in the Hybrid Proof-of-Work phase to a static 6% APR in the Proof-of-Stake, the market will never be flooded with excess Innova. While the Fortuna Stakes running on the network are rewarded 65% of the block reward, in the case of Proof-of-Stake this means 65% of the 6% reward is paid out to the Fortuna Stake. This also encourages most Innova to be locked for staking in either Fortuna or standard stake methods, keeping it off the market. This, in turn, will ensure a positive growth in value as Innova offers more and more services.

Innova Pay

Many Cryptocurrencies are offered as payment method for services rendered, but most of the time it comes with unnecessarily complicated steps and an unprofessional payment gateway, alienating uninitiated users and thus making said currencies an unattractive option for today's streamlined, fast-paced market. The Innova Core Team is proud to announce the Innova Pay E-Commerce plugin which will bring Innova to any E-Commerce site, giving a user-friendly, easy-to-use option specifically designed for technically challenged users. This plugin directly interacts with the Innova Blockchain to allow transactions to be processed at unprecedented speeds. With security, ease-of-use, and speed in mind, we aim to offer Innova as an option for anyone and everyone to implement into their business model.

Exchanges & Trading

Cryptocurrencies are very risky, highly volatile, and speculative. Thus, they may be illegal or legal depending on where you live. Therefore, we encourage you to do the necessary background check and consult a legal counsel and licensed financial advisor before investing in any kind of cryptocurrencies. Innova coin is readily available for trading and purchasing on CREX24, AltMarkets exchange, and will become available in other exchanges as we expand our network reach.

At the time of writing this whitepaper (2020), Innova Coin is readily available for trading and purchase on the previously mentioned exchanges with the ticker INN.

Coin Specifications

Coin Name:	Innova
Coin Ticker:	INN
Address Prefix	i
Stealth Address Prefix:	s
Block Time:	~15 Seconds
Algorithm:	Tribus
Type:	Hybrid PoW/PoS
Block Reward:	Hybrid Phase - PoW (Please Refer to PoW Graph in page x)/ PoS (Transaction Fees only) PoS Phase - 6% APR
Confirmations:	10 Blocks
Maturity:	75 Blocks
Max Supply:	25 Million