Primecoin and Prime Chain Proof of Work

A new type of proof-of-work based on searching for prime numbers is introduced in peer-to-peer cryptocurrency designs. Three types of prime chains known as Cunningham chain of first kind, Cunningham chain of second kind and bi-twin chain are qualified as proof-of-work. Prime chain is linked to block hash to preserve the security property of Nakamoto's Bitcoin, while a continuous difficulty evaluation scheme is designed to allow prime chain to act as adjustable-difficulty proof-of-work in a Bitcoin like cryptocurrency.

Primecoin Whitepaper

Why Primecoin?

Useful PoW

Primecoin's Prime Chain Proof of Work secures the blockchain through the search for Twin Prime Chains and Cunningham Chains.

Energy Multi-Use

Primecoin is the first cryptocurrency to achieve energy multi-use, offering an alternative paradigm for blockchain security.

Mystery of Sciences

Primecoin pays homage to the deepest mysteries in Arithmetics, which are now more and more seen as deeply connected to the mysteries of our physical Universe.

Smooth Experience

Primecoin's transaction confirmation is both faster and smoother. Primecoin adjusts both network difficulty and mining output smoothly.

Gold Simulation

network security.

Balanced Inflation

Primecoin's security is independent of network transaction fee, and only provided for through balanced inflation to compensate for mining.

Introductions

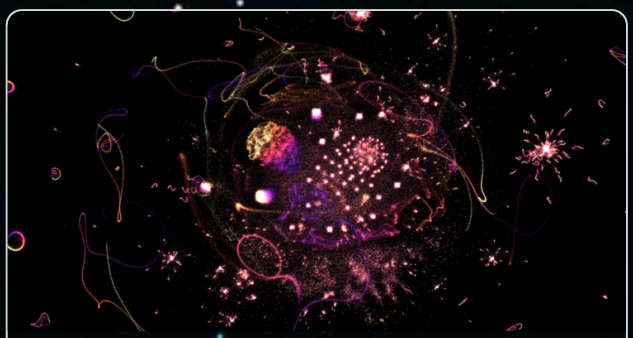
Primecoin in popular languages and imagination

Animated Introduction to Primecoin

Ever since the creation of Bitcoin, its consensus algorithm has been based on Hashcash, which asks miners to grind a secure hash function to find a smaller and smaller hash value. In contrast to this, Primecoin's innovative consensus asks miners to search for longer and longer Twin Prime Chains.

View On Youtube ...

28 Dec 2019, produced by **Primecoin Project**



Exploring The Infinite With Primecoin

"An equation means nothing to me unless it expresses a thought of God."

Srinivasa Ramanujan

Bitcoin's Proof-of-Work, based on Hashcash, is wasteful of energy. In fact, that's entirely the point of Hashcash; to consume an attacker's resources.

Read More ...

6 Jan 2021, by **Gigamesh**

Primecoin: The Cryptocurrency Whose Mining is Actually Useful

One of the disadvantages of Bitcoin that its proponents often gloss over is the fact that its mining algorithm has little real-world value. The underlying issue is this: in order to add a new block to the Bitcoin blockchain, a Bitcoin miner must include a "proof of work",

Read More ...

8 Jul 2013, by **Vitalik Buterin**

May the Force be with You

Wish our civilization pass the tests and tribulations to the next level

Wallets

Core Wallet for PC platforms, Primer Wallet for Android and Gemmer Multi-Wallet for Android. Gemmer listing is FREE for all blockchains!

Download

Community

Primecoin is an open community rooted in open-source and crypto culture. Everyone is welcome to have some fun here!

Join Primecoin Discord

World Records

Another world record broken on 30 March 2018! Primecoin found the first length 15 Twin Prime Chain, which has an origin of 96 digits!

More World Records

Mining

Primecoin mining is currently mostly GPU based. Pool mining and Solo mining options are available.

Mine Primecoin

Resources

Community and 3rd party services such as explorers, charts, tickers, exchange markets and more!

Community Wiki

Apps

A suite of mobile apps designed for Android with open technological and ecosystem support!

Download Apps

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