Rutheneum

Overview & White Paper

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RUTHENEUM: E-PAYMENT SOLUTION PEER -TO- PEER CRYPTO BLOCKCHAIN ECOSYSTEM.

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Abstract: Rutheneum is a Decentralized, peer-to-peer, Open Source community based crypto currency, which is completely safe and secure and held electronically. You can exchange rutheneum for different crypto and flat currencies, products, the same as you can with any paper money. We propose a solution to the double-spending problem using peer-to-peer network. The network timestamps transactions by hashing them into an ongoing chain of hash-based proof-of-work, forming a record that cannot be changed without redoing the proof-of-work. The most probably how money would look like if it had been invented today. As a Block chain technology, it is believed to be as important as the internet. The 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. Transactions that are computationally impractical to reverse would protect sellers from fraud, and routine escrow mechanisms could easily be implemented to protect buyers. It has the properties of money (easy to transport, transfer and divide into units) Transactions can be fractured in smaller sub-units of a rutheneum, such as ruts.1 rutheneum = 1 000 000 ruts. Rutheneum is well-known crypto currency worldwide, resulting in high public authority.

1. Introduction

Rutheneum is a digital currency based on cryptography that was created in 2017. Since then, it has grown to be used by millions of users around the world. The core concept of Rutheneum is that there is no central authority, meaning that Rutheneum are safe from the perils of debasement, which is one of the major threats to fiat currency. Rutheneum is an innovative payment network and a new kind of money. You can start here or here to get started with this awesome technology. The main idea was to create a currency independent of any central authority, transferable electronically, more or less instantly, with very low transaction costs.

Rutheneum runs on a block chain technology, A purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a Financial institution. Which is often described as "a transfer of trust in a trustless world". It is a distributed, public ledger of all rutheneum transactions that have ever happened. It consists of blocks. Each block stores details of transactions made in a certain time frame. They are put one on top of the other chronologically. Every time a miner creates a block, they get a reward in new rutheneum. The block is updated, and everyone on the network is informed about it. And it's a system for value transfer, which rules out the need for a central authority to verify trust. It takes control and power from central entities to the many, enabling safe, quick, cheaper transactions despite the fact that we may not know the entities we are dealing with. It's a technology with the power to change the world.

2. Why Use Rutheneum

Fast

Transactions are instantaneous and on average take 30 Seconds to get confirmed.

Cheap

Transaction fees are minimal (0.000100 Ruts) and go to miners, who are making sure transactions are secured and confirmed. Move that money around the world almost instantly with miner cost.

Decentralized

No central authority: no central repository of information, no central management, and no central point of failure.

Scarce

There will only ever be 10 billion rutheneum; we have never experienced anything like it before. Also, this means there is no inflation.

Safe

With credit cards we share our private information with the World Wide Web and make it easy to steal our payment information. If you keep your private key private, rutheneum is a safe place. Store value securely, privately and digitally.

No more middlemen

Transactions are controlled only by miners. There is no one in between you and a recipient.

3. What is Our Mission?

Rutheneum community mission is to provide every person and business with access to alternative financial services. We promise to develop technologies that are secure, accessible and easy-to-use. Provide the most convenient payment services for reasonable prices and via all technologies. The mission of Rutheneum is to bring the benefits of digital currency payment technology to merchants, consumers, & mainstream societies across the globe in the most easy to understand way possible.

A secure rutheneum wallet designed for high performance enterprise use. Our solution is focused on high velocity transactions and security.

4. What is Our Vision?

World where electronic payments have no boundaries, are simple, fast and accessible to anyone and anywhere. We envision Rutheneum becoming a decentralized payment network & digital currency used by millions of people across the planet to quickly & easily buy and sell good & services over the internet, in store, or person-to-person with little to no fees.

5. Transaction

We define an electronic coin as a chain of digital signatures. Each owner transfers the coin to the next by digitally signing a hash of the previous transaction and the public key of the next owner and adding these to the end of the coin. A payee can verify the signatures to verify the chain of ownership. The problem of course is the payee can't verify that one of the owners did not double-spend the coin. A common solution is to introduce a trusted central authority, or mint, that checks every transaction for double spending. After each transaction, the coin must be returned to the mint to issue a new coin, and only coins issued directly from the mint are trusted not to be double-spent. The problem with this solution is that the fate of the entire money system depends on the company running the mint, with every transaction having to go through them, just like a bank. We need a way for the payee to know that the previous owners did not sign any earlier transactions. For our purposes, the earliest transaction is the one that counts, so we don't care about later attempts to double-spend. The only way to confirm the absence of a transaction is to be aware of all transactions. In the mint based model, the mint was aware of all transactions and decided which arrived first. To accomplish this without a trusted party, transactions must be publicly announced [1], and we need a system for participants to agree on a single history of the order in which they were received. The payee needs proof that at the time of each transaction, the Majority of nodes agreed it was the first received.

6. Timestamp Server

The solution we propose begins with a timestamp server. A timestamp server works by taking a Hash of a block of items to be times tamped and widely publishing the hash, such as in Newspaper, The timestamp proves that the data must have existed at the time, obviously, in order to get into the hash. Each timestamp includes the previous timestamp in its hash, forming a chain, with each additional timestamp reinforcing the ones before it.

7. Click Mining

The special to extraordinary ability to be mined by every Rutheneum coins user from home. It is said, that it is impossible to create gold at home. With the new block chain technology of Rutheneum coins you are able to create by clicking with your wallet. Do you own a device with internet connection With Rutheneum coin's click mining you are able to mine your coins easily and comfortably from your favorite Place? All you need is a computer, a tablet, mobile app or your laptop and an active internet connection. Rutheneum coin can be mined with Script algorithm to earn a reward through POW mining the RTH coin wallet holding minimum 1000 coins for active mining script algorithm for your operating system.

The mining also solves the problem of determining representation in majority decision making. If the majority were based on one-IP-address-one-vote, it could be subverted by anyone able to allocate many IPs. Proof-of-work is essentially one-CPU-one-vote. The majority decision is represented by the longest chain, which has the greatest proof-of-work effort invested in it. If a majority of CPU power is controlled by honest nodes, the honest chain will grow the fastest and outpace any competing chains. To modify a past block, an attacker would have to read of the proof-of-work of the block and all blocks after it and then catch up with and surpass the work of the honest nodes. And reduce the prevalence of CLICK mining Rutheneum are created as a reward for payment processing work in which users offer their computing power to verify and record payments into the public ledger. This is called mining and is rewarded by transaction fees and newly created rutheneum. Click Mining has become quite a business, so it is probably not the best way for you to get them.

8. Payment Verification

A user only needs to keep a copy of the block headers of the longest proof-of-work chain, which he can get by querying network nodes until he's convinced he has the longest chain, and obtain the Markel branch linking the transaction to the block it's times tamped in. He can't check the transaction for himself, but by linking it to a place in the chain, he can see that a network node has accepted it, and blocks added after it further confirm the network has accepted it. As such, the verification is reliable as long as honest nodes control the network, but is more vulnerable if the network is overpowered by an attacker. While network nodes can verify transactions for themselves, the simplified method can be fooled by an attacker's fabricated transactions for as long as the attacker can continue to overpower the network. One strategy to protect against this would be to accept alerts from network nodes when they detect an invalid block, prompting the user's software to download the full block and alerted transactions to confirm the inconsistency. Businesses that receive frequent payments will probably still want to run their own nodes for more independent security and quicker verification.

9. RTH Shield Data

RTH Shield allows any RTH data objects to be serialized and transmitted securely to one
Or more recipients. A RTH Shield data packet-header contains the sender's public key and the public
keys hashes of the recipients. RTH Shield headers contain a verification hash, which is generated using
the sender's public key and the raw unencrypted data. This hash is verified during decryption of RTH
Shield data to ensure that the recipient info in the header matches the encryption key, and that the data
Has not been altered.

10. The Rutheneum Protocol

The Rutheneum has at its core the right formulae for it to establish itself as the leading globally accepted
currency. This assumption stems from the bases on which Rutheneum was originally conceived by its
creator. The original idea for Rutheneum was to create a digital cash equivalent, largely for small
nonreversible payments to enable a cheap, digital medium of exchange. However, given the properties
of the Rutheneum protocol, it is fit to replace the dominant currencies presently used in global trade. As
global trade is carried out pre dominantly in US Dollars. The USD monetary system dominates world
trade in physical goods and derivatives trading alike. By virtue of being the dominant currency, it also
influences all other national fiat currencies. The most notable feature of the USD is called – monetary
credit expansion. The USD monetary system is governed by The Federal Reserve System of the United
States of America. Monetary credit expansion is a characteristic of all fiat currencies that are no longer
linked to commodity money, such as gold - a fixed asset. There used to be a time when gold was used as
a unit of account and a medium of exchange for trade on markets globally. Before the ascent of central
banking and fiat currency, gold was used for international trade. While debasement has historically been
present, due to monopoly rights for coin minting, it occurred rarely, usually only when a new king came
to power, or a kingdom needed to finance a war. The most ruinous effects today, however, constitute
the ever expanding monetary base of centrally governed monetary systems, synonymous with constant

price inflation. Money is a medium of exchange for goods, not a good in itself. While a nation's wealth
increases when more goods are produced, the same cannot be said about the amount of money
printed. Unlike gold and silver that are favored for their intrinsic appeal, luster, ornamental or industrial
value, and the initial and sustained demand for Rutheneum.

11. Rutheneum Economy

The Rutheneum economy is still on the runway. This section examines bit coins in terms of usage and
the potential for it to become a universally accepted currency; the statistical data on payments, and
arguments on the nature of payments that constitute the relevancy of any currency.

Usage Perpetual human action is the very foundation of any economy. Humans are economic agents in constant pursuit of their individual goals. If individual agents are free, their business interactions result in the exchange of consumption and production of goods and services. The medium of exchange that facilitates these transactions between various agents swapping goods and services is money - the most liquid of all assets - which creates market equilibrium between production and consumption. Now, what it is, exactly, that constitutes a medium of exchange – money – cannot be ascertained by anything other than its usage. The more widely an asset is used, the more likely it is to become a universally accepted medium of exchange. Rutheneum is increasingly being used for retail. A comprehensive collection of vendors and merchants that accept Rutheneum as a payment.

12. RTH Deterministic Wallet Address

RTH utilizes change addresses as part of the Blocking process. The addition of a hierarchical deterministic wallet (see BIP 0039) will allow a wallet to be recreated using the same 12-word mnemonic of common English words. This will preserve change address keys without the need to backup the wallet itself.

13. Powerful API for payouts automation

If you desire to automate your payouts, Rutheneum API is exactly what you need. Our system will provide you with an API so that you can connect with your customers, your suppliers and even your employees, which would make it convenient for you to make any payment with those kinds of people.

14. Roadmap

We will gradually introduce Rutheneum coin in to the work of globally to give users the benefits of Rutheneum coin trading and by click mining as soon as possible.

Phase	Date	Features
Phase-I	16th Nov 2017	1. Pre-Registration Start 2. Gets 100 coins Free
Phase-II	1st Dec 2017	1. Start of ICO 2. Close ICO on 15th February 2018 3. Price ICO $0.02

Phase-III	20th Feb 2018
	
	28th Feb 2018
		1. Coin Start Listing on Different Exchangers.
		   i) Bittrex.com
		   ii) Cryptopia.co.nz
		   iii) Coinexchange.io
		2. Development for Rutheneum coin exchange launch
		3. Target Price $1.0 to $2.5
		4. Trading RTH Coin
		5. Inline chain matching engine
		6. Access via RTH Wallet

Phase-IV	20th Mar 2018	1. Training how to use online wallet 2. Introduce new user to the platform 3. Multi choice of devices : Mobile, Desktop, Mobile Application (Android, IOS) 4. Anyone can access and make transaction worldwide. 5. Top-up Mobile & Television
Phase-V	20th Apr 2018	1. International Promotional of Rutheneum 2. RTH e-Business solution June 2018 3. Future Payment Method Nov 2018 Launch Rutheneum MasterCard 4. Money deposit & Withdrawal through wallets such as Neteller, Skill, PayPal, Perfect money and Payeer e-wallet. 5. Implementation of 350 online shops 6. Rutheneum mining started July 2018 accepting Rutheneum coin(RTH) on end 2018. 7. Full- Implementation on crypto market in 2019

15. Rutheneum Future benefits

- Rutheneum wallet is fast transaction processing and the easiest way to buy, sell or Exchange and Cash out of Rutheneum in globally with minimal fees.
- Withdraw your money worldwide.
- You can fully use our platform from your smart phone Download our app now! It's free,
- For Freelancers and international Community.
- Send and receive money from all over the world.
- There is no fee to store your Rutheneum on RTH Wallet.
- Recharge any mobile, Data Card or Television: you can easily top up by using our Rutheneum wallet from all over world.
- Secure: 4-digit PIN to lock your wallet and outgoing transactions. with high security PIN Protection.
- Easy to set-up Prices in your local currency with Secure transaction..
- Account statements are See your full transaction history with all details.
- Automatic Conversion and Instant Payment Verification.
- Excellent Customer and QR Code support at https://rutheneum.com

16. Rutheneum Specification

Name	Rutheneum
Symbol	(RTH)
Decimal	6 (SIX)
Algorithm	Scrypt (POW,POS)
Mining pool	Yes
Total Coin Supply	10 Billion
Initial Coin Offering (ICO)	06 Billion
ICO Date	1st Dec 2017
Close ICO Date	15th Feb 2017
Price Per Coin(USD)	$0.02 (USD)
Time Zone	USA (GMT)

17. Rutheneum Bonus

Date	Bonus	Price (USD)
Pre- Registrations	100 Coins	Free
1st – 7th Dec 2017	15%	$ 0.02
8th- 21st Dec 2017	10%	$ 0.03
22nd Dec 2017 – 16th Feb 2018	20%	$ 0.02
17th Feb – 28th Feb 2017	0%	$ 0.02

18. Rutheneum Price Prediction
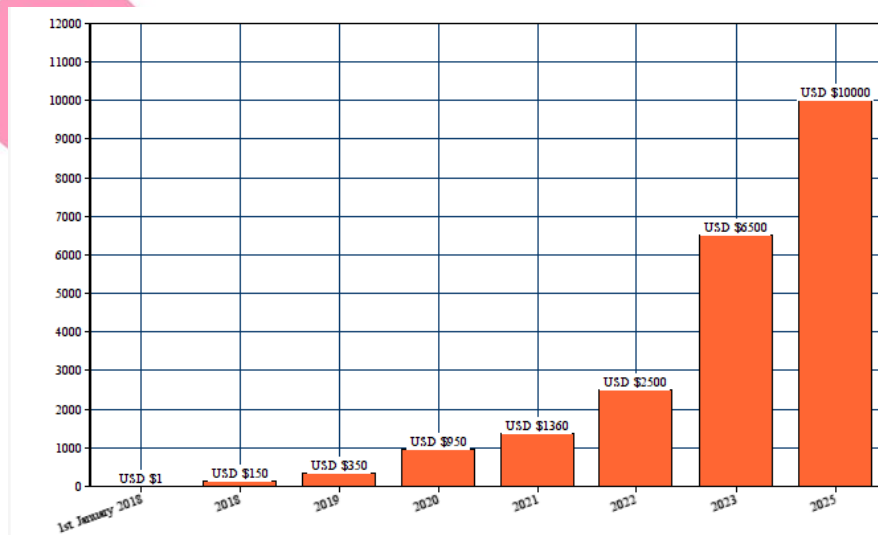
Year	Rutheneum (RTH) Price Prediction!
1st January 2018	USD $1.0
2018	USD $150
2019	USD $350
2020	USD $950
2021	USD $1360
2022	USD $2500
2023	USD $6500
2025	USD $10000

19. Rutheneum Reward and referral Bonus

With Rutheneum attractive referral program you can earn additional Rutheneum (RTH) coins by telling other Users about this opportunity and referring them to Rutheneum community. We are offering a bonus program which enables you the possibility to earn more for every new user who signs up and joins to Rutheneum lending platform using your affiliate link. And gets 10 coins free all registered partner. You will earn a commission every time a referral Rutheneum on our Platform through your affiliate link with 5% Direct Referring reward Coins bonus partners signs in.

20. Plan for Distributing Rutheneum coins ICO

- ICO Distribution 60 % sold to contributors, 40% retained by the mining which includes bounty and referral programs, if enacted.
- RTH coin ICO will be released of the RTH network, RTH coin ICO can be converted to Rutheneum coins (RTH) for the Rutheneum network at a Rate of 1 to 1.
- Holders of RTH ICO will be able to send these ICO to the indicating own address in RTH Network where they want to receive yours RTH coins.

21. The Breakthrough solution of Rutheneum

Rutheneum is an advanced solution which could allow users access to a simpler, safer and faster transaction method. People from all walks of life can take advantage of Rutheneum for their own sake. Rutheneum provides users with a global fastest money transaction yet absolutely safe and with lowest fee. You can use Rutheneum, of course, to transfer money, to purchase and sell goods and services worldwide, with lowest fee and within seconds. Rutheneum allow you access the most user-friendly application, especially payment transaction via apps for smart phones.

Rutheneum is designed to not only become an digital currency that can meet the highest advanced technology standards but also become the most user friendly digital cash and can be easily used by anyone.

- Block chain technology
- Decentralized
- Peer-to-peer network
- Anonymous
- None institutions or governments

22. Rutheneum Wallet

Here are some types of wallet that we offer our users:

- Desktop wallet: Window, Linux, Mac
- Web wallet: wallet.rutheneum.com
- Mobile wallet: Android App, IOS App Mobile wallet app is designed with the highest

Level of security and it is really a user-friendly app that you would trust in and fulfill you satisfaction.

23. Rutheneum Ecosystem
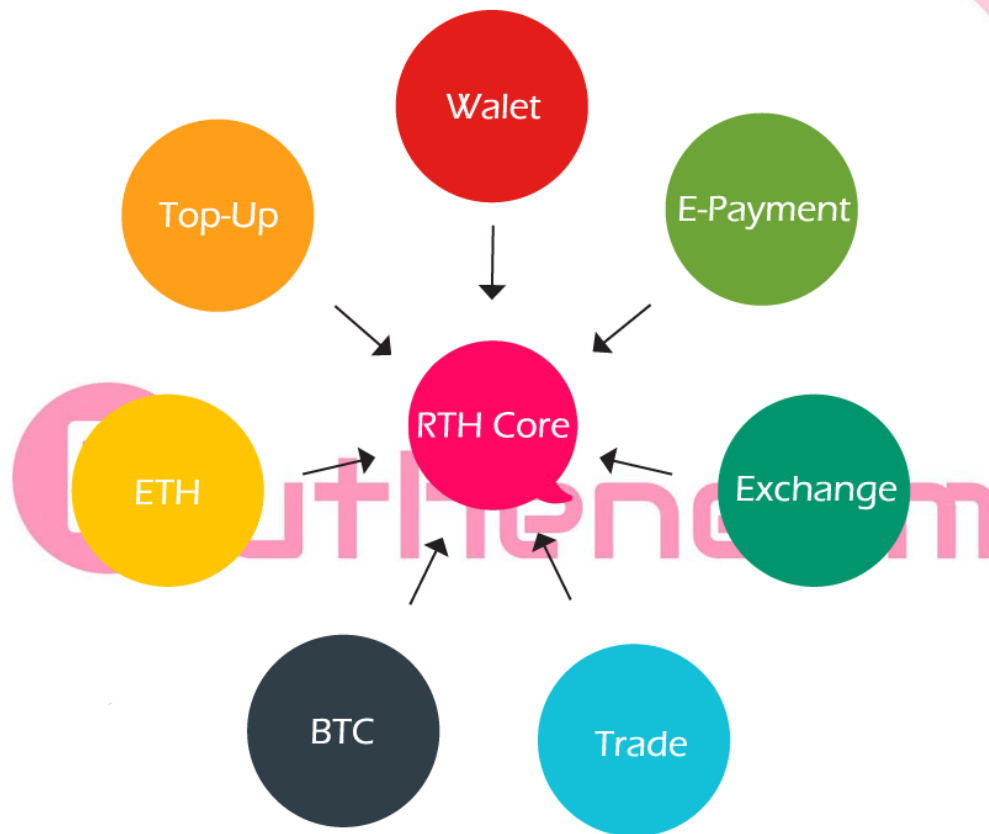
Master Card Using Master Card of Rutheneum is the simplest and the most convenient way to make your payment, do your any money transaction. We, with our partners, will provide you with the Master Card that you can use anywhere, at anytime all Rutheneum.com over the world. You can also use it to withdraw or transfer money via an ATM machine.

24. RTH Exchange

You can trade and make profit on the RTH Exchange. Right after the ICO, we will open RTH Exchange so you can trade and buy Rutheneum. You can also trade through our partner floors, the partner floors will be introduced after the ICO.

25. Entrepreneurs

Offer you access the most convenient method payment when it comes to making payments regarding business expenses including wages, payment for suppliers, for goods and services...all over the world, within second, with an extremely low fee, Checkout for merchants Rutheneum enables you to start receiving your payments on your own website.

No more cash

There is no more limit to carry foreign exchange to anywhere you go with Rutheneum. No more worry about the exchange rate fees that you may be charged a lot, and many other expenses related to money exchange and transfer. Therefore, save your time, money, and of course, the less cash, the safer.

Other daily money transaction

With Rutheneum, just within seconds, you can access your money transferred from anyone anywhere on this planet. Faster, simply, secure but cheaper.

26. Rutheneum Team
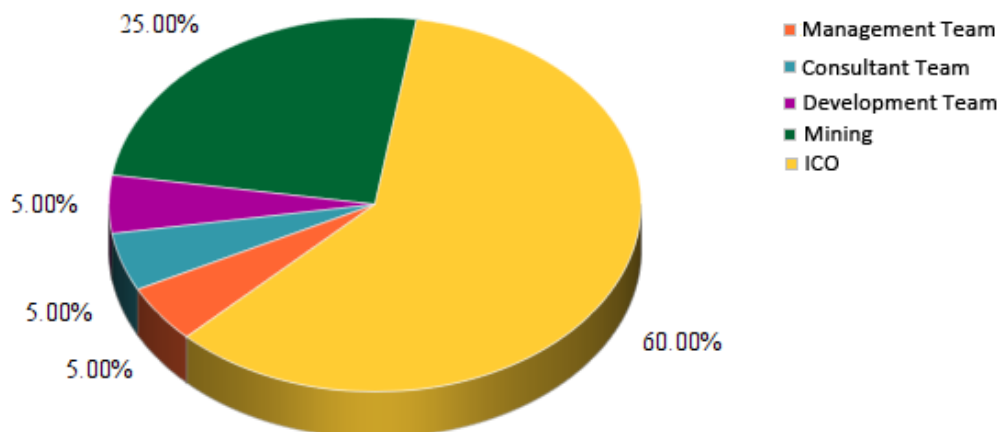
On behalf of Rutheneum Team, we thank you for your interest in our White paper. The White paper has given you a brief summary about our mission and vision, our commitment to all of you. To fulfill our commitment, we have organized our Team as below:

Development Team

This is our key Team, on whom we have invested a huge amount of budget so that our Team could continually improve and generate outstanding and stable technology value for Rutheneum. It is our great honor to have a chance to work with the most talented and leading groups in our digital currency field. We commit to cooperate and try our best to provide you with the most advanced and breakthrough products and services.

Management Team

A remarkable success requires a long term vision as well as leading management experience, that is the reason why we decide to work with the most experienced and talented managers in technology, marketing, business field.

Consultant Team

Instead of wasting time on things that has not been approved to be feasible, we choose to work with experienced and successful people, who know what to do to realize their financial success with a number of projects and what to do to help others.

Third party partners

Beside our own team, we also cooperate with Third party partners. We believe that with their experience and ability, they would contribute a lot to the success of Rutheneum. We have always considered whom to work with, so that we all together would provide you with the best products and services ever.

27. Conclusion

We started with the usual framework of coins made from digital signatures, which provides strong control of ownership, but is incomplete without a way to prevent double-spending. To solve this, we proposed a peer-to-peer network using proof-of-work to record a public history of transactions that quickly becomes computationally impractical for an attacker to change if honest nodes control a majority of CPU power. The network is robust in its unstructured simplicity. Nodes work all at once with little coordination. They do not need to be identified, since messages are not routed to any particular place and only need to be delivered on a best effort basis. Nodes can leave and rejoin the network at will, accepting the proof-of-work chain as proof of what happened while they were gone. They vote with their CPU power, expressing their acceptance of valid blocks by working on extending them and rejecting invalid blocks by refusing to work on them.

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https://github.com/bitcoin/bips/blob/master/bip-0039.mediawiki
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http://blog.atmel.com/2014/10/21/ecdh-key-exchange-is-practical-magic
https://bitcointalk.org/index.php?topic=279249.0 (CoinJoin: Bitcoin privacy for the real world)
https://bitcointalk.org/index.php?topic=27787.0 (Proof of stake instead of proof of work)

RUTHENEUM

www.rutheneum.com/rutheneumcommunity