Using the blockchain to find the next prime number

Alberto Mardegan

A distributed ledger



Chain of data blocks



Proof of Work

- Small change in data \rightarrow Different hash
- Include a variable "nonce" in the data block
- Find hash satisfying a certain requirement

Smart contracts

- Set parties, conditions, inputs and outputs of the transaction
- Ethereum's VM is Turing complete

Issues

- Energy consumption
 - Bitcoin: ~50 Twh per year
 - Ethereum: ~10 Twh per year

Primecoin specialty: compute prime numbers

"Given [...] the growing costs of running full Steem nodes, we have been forced to layoff close to 70% of the team"

• Storage size



Issues, continued

- Speed:
 - Prioritization via transaction fees
 - Latency
 - Not better than a single node's

Issues, continued

- Increasing wealth disparity
 - hardware and bandwidth requirements

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Voatz is on a mission to make voting safer and more accessible.

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Available only by invitation from your election organizer.

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	of Voatz 🗹	
	What is Voatz?	
Voatz is an el vote secu	lections platform you car irely and remotely from y smartphone.	n use to Your
	Sign Up	

MintHealth Solution

MintHealth leverages blockchain technology to empower patients with a self-sovereign health identity – a global, holistic record of their medical data



් Forevermore

Your Wedding Vows

Committed to the blockchain

Write Vows



Vows

Mr. KHAN and Mrs. K...

Married on December 28, 2015

النكاح من سنتي

mr shaikh and mrs sh... Married on May 9, 2012

i love you

A and R Married on December 28, 2000

ee

MR1 and PR2 Married on November 16, 2018

1000 Mat Type

Marriage On The Block



Here are a few benefits of registering your marriage on the blockchain:

• Have access to your marriage certificate anywhere at any time!

Because your marriage certificate lives on the blockchain, you can read it and get a copy of it in seconds.

• Save a lot of time and money!

It takes only a few minutes to register a new certificate for a minimal price. No more standing in line to get married, to get the certificate or to update the marriage status.

• Handle your marriage yourself!

Your marriage smart contract allows you to update your marriage status in a few seconds, including divorcing.

Become your own bank!

The smart contract keeps tract of two different accounts: a "joint account" where you can both deposit and withdraw money and a "savings account" where you can both deposit money but must both agree before a withdrawal.

Ethereum URL Shortener

Powered by Metamask and POA Network Example - http://rss.hm/s?id=13 State Of Dapps









Many Referral Programs

Two options to build a strong, effective referral/reward campaign. Either create stand-alone referral/reward program using open-source APIs, or participate in Plentix's referral ecosystem and share a common digital currency.



Innovative architecture

Plentix seamlessly plugs into companies retailing sale or POS systems, but users see one interface and only sign up once to Plentix application.



Flexible reward options

Referrers may get a reward in tokens for every active referral, or even get commission for first three purchases; it is up to the business to choose.



Decentralized and automated

Smart contracts automation - allows programmers to easily plug and play with supported software, enabling reduced cost with effortless scaling capabilities and automation.



Grafiti lets you archive anything in the blockchain. Posts are uncensorable and preserved forever in Ethereum.

What is Ethereum?

Ethereum is the world's auditable decentralized computer. Ethereum's token, ether, is currently the second-most valuable cryptocurrency in terms of market capitalization, behind Bitcoin. Ethereum differs from Bitcoin in several ways, the most important being that its smart contracts are <u>Turing Complete</u>. Code deployed to Ethereum is immutable, so the terms of contracts never change. All code and code execution is auditable public record on the <u>blockchain</u>. Identity and privacy are protected via <u>public key cryptography</u>. Read more about Ethereum in its <u>White Paper</u>.

What makes NoteChain awesome?

Eternal

Always running and can't be stopped by anyone or anything.

Decentralized

Everyone owns it yet in the same time no one really does.

Secure

All data is securely encrypted before leaving your browser.

Uncensorable

Data on blockchain can't be removed or modified.

Unbinding

Self host this on your own laptop and be independent.

Private

Write notes which can be read by no one else but you.

Open Source

Code which run NoteChain is viewable by everyone.

Shareable

Each note can be made public and shared with an ID.

No Tracking

No one know you were here. All web assets are served by us.





Steemit Blog Golos Blog FAQ Contact Us Share moments, earn coins!

We`re happy to announce Steepshot, a platform that reward people for sharing their lifestyle and visual experience. You can use it to share cool pictures you`ve taken with your mobile phone, curate and comment photos your friends make and never worry that any third party

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APP STORE GOOGLE PLAY



DNN

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Collaborative News for the People.

DNN uses the blockchain to distribute censorship- resistant and verifiable news, while ensuring accuracy and transparency through incentivization.

Try DNN



*Reader DNN tips are distributed directly to writers (95%) and reviewers (5%).

Where we have been featured:











The Blockchain Show



TRUTH STAKING LEARN MORE

Truth Staking is like competitive crowdfunding for the truth.

- Individuals submit claims made by the media (and earn Ether for doing so)
- The crowd stakes Ether on the claim being True or False
- When the staking period ends, the money is counted and the majority position wins
- Players who staked with the majority win the money staked by the players in the minority
- Larger stakes earn bigger returns. For example, if you stake twice as much as your friend, you will receive twice the return. See FAQ.



The DAO





Food for thought

- Security vs insurance
- Decentralization vs real world
- Blockchain vs signed backup

Questions?

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 - http://www.mardy.it
 - Twitter: @mardy
 - GitHub, GitLab: mardy