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Here Comes the Epoch of Blockchain

It was the best of times, it was the worst of times...



Frontier, the 1st live release of the Ethereum project,
launched July 30, 2015

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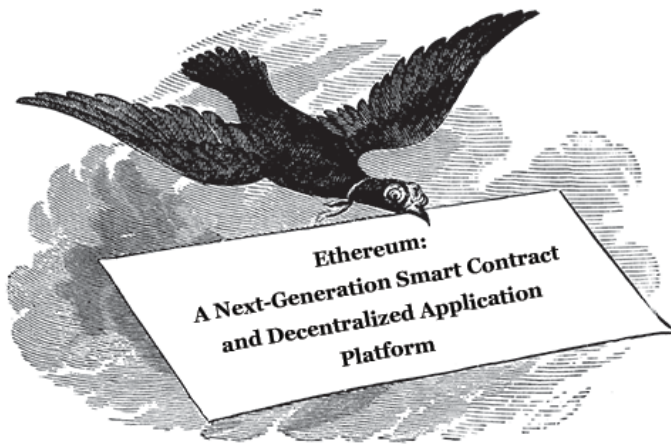
We live in a centralized world.

A world where wealth is kept in centralized banks and information is stored on centralized servers. A select few hold the keys to these vaults of power.

In 1859, Charles Dickens proclaimed, “[i]t was the best of times, it was the worst of times.” [1] A century and a half later, the world is experiencing a similar polarity. Technology and innovation have driven the captains of industry to great wealth, while the vast majority of the human race struggles to get by.

The wealthiest eighty people on earth today have as much wealth as the

poorest half of the population. [2] Nearly three billion people survive on less than two dollars a day. [3] In many ways, the centralization of power, technology and wealth is a major contributing factor to these disparities.



The Ethereum Whitepaper:

<https://github.com/ethereum/wiki/wiki/White-Paper>

Subtle sounds of change have been rippling through technological communities. These new thoughts are based on the Ethereum whitepaper [4] that proposes the use of blockchain technology [5] to mediate arbitrarily complex agreements and promote decentralization.

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ConsenSys is the leading Ethereum software company building MetaMask, Infura, Codefi,



ConsenSys (Consensus Systems) is a blockchain production studio developing decentralized tools and applications.

Accordingly, Consensus Systems (ConsenSys) has brought together some of the brightest minds from across the globe in technology, cryptography, economics, anthropology, and other fields to build a new future this new computing paradigm enables. This paradigm is decentralized, and built primarily on the Ethereum Network. It offers an alternative to the centralized status quo.

What is wrong with centralization?

Just ask the citizens of Greece whose

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money is in a centralized bank, that in June and July of this year could only access €60, per day. [6] Ask Chinese Uber drivers who are penalized based upon where they drive by their centralized employer. [7]

Ask the forty-seven thousand Sony employees whose social security numbers were stolen [8], forty million Target customers whose credit card information was stolen [9], or the seventy-six million households affected by the JP Morgan hack. [10] Casualties of centralized data.

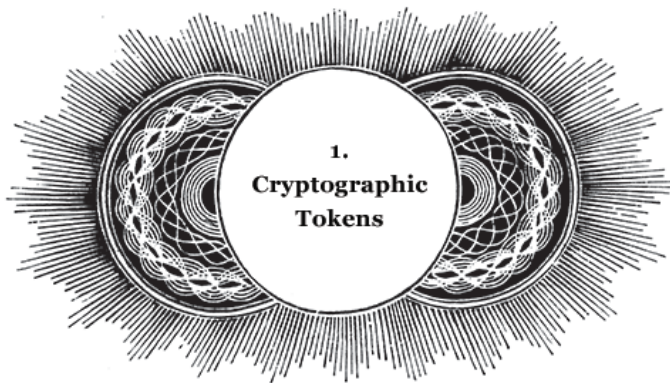
Institutions have used centralized technology to monopolize power. The average person suffers.



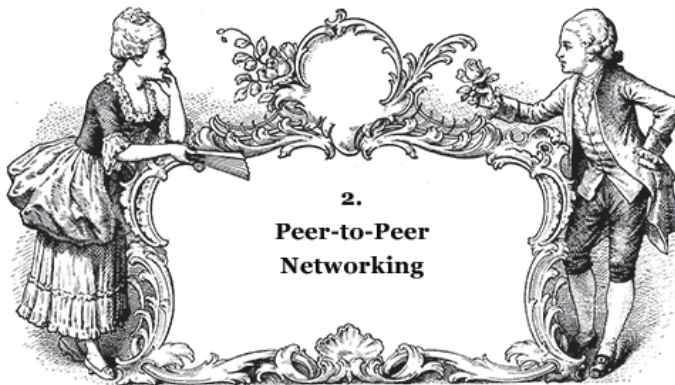
How can this dominant centralized model be changed?

ConsenSys aims to break this monopolization. ConsenSys' technology will run primarily on the Ethereum network that was developed after 6 years of academic research on Satoshi Nakamoto's seminal white paper. [11]

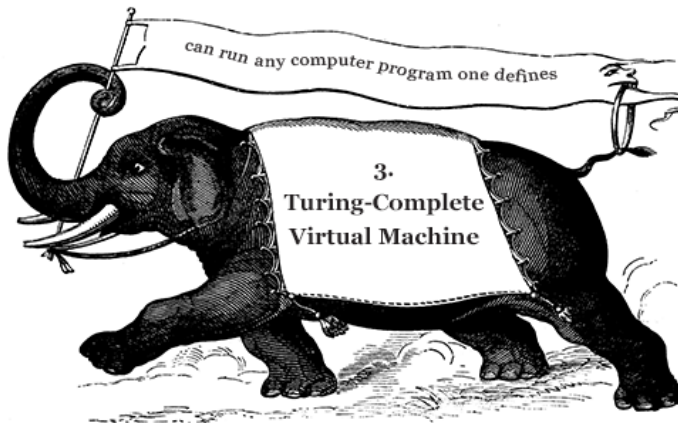
There are 4 major interdependent components that enable this platform to operate:



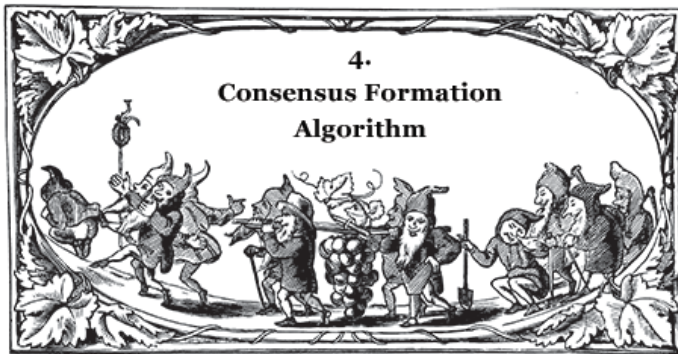
A mathematically proven unique voucher that can be exchanged for goods, services or assets.



Individual users connect their computers together forming a network without a central server.



A virtual machine is a computer that exists as software. It can be run independently of the underlying hardware. “Turing complete” means that this software computer can run any computer program one defines.



This algorithm permits users of the blockchain to reach consensus about the current state (all of the data) of the blockchain every 15 seconds.

These 4 pillars of the technology are designed to enable Smart Contracts: trust free interactions and agreements.

Smart Contracts are computer protocols that facilitate, verify, or enforce the performance of a legal or financial contract, or really any sort of agreement that multiple counterparties can codify. These Smart Contracts usually also have a user interface and often emulate the

logic of contractual clauses. Thus traditional dead tree contracts could become moot for the purposes of certain transactions. Rather than drafting a costly, lengthy contract using attorneys, banks, notaries and Microsoft Word, contracts might be created with a few lines of code, perhaps constructed automatically by wiring together a handful of human readable clauses.

A Simple Loan Contract

For example, this snippet, recently drafted by a ConsenSys intern and Columbia University student named Mike Goldin, could do the majority of work generating a credit agreement:



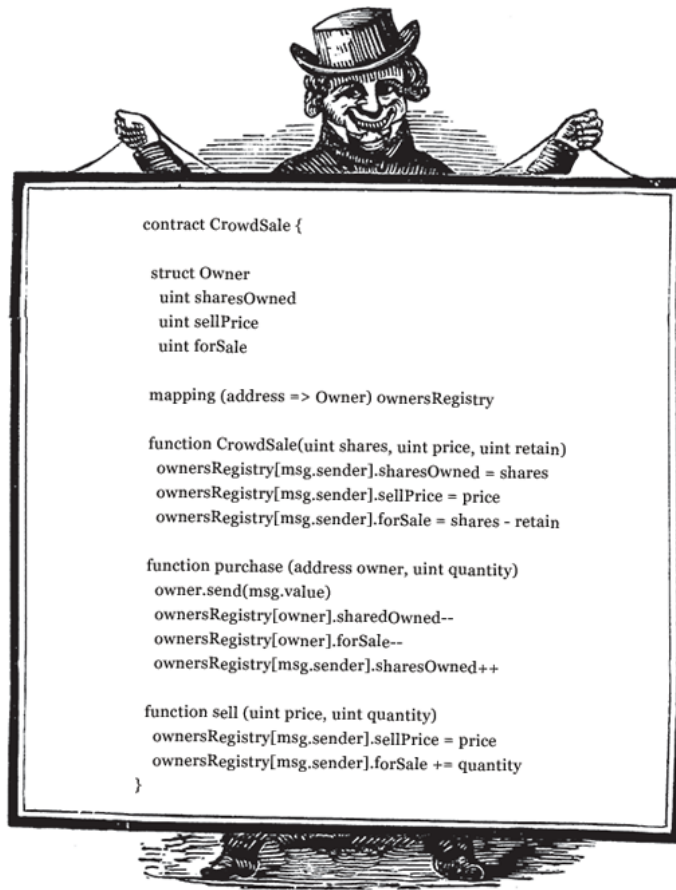
A loan contract can be written using Ethereum (pseudocode shown here).

This type of code could change the way transactions are carried out, reduce friction, eliminate middlemen, drastically reduce costs, and empower individuals and smaller organizations rather than large centralized institutions.

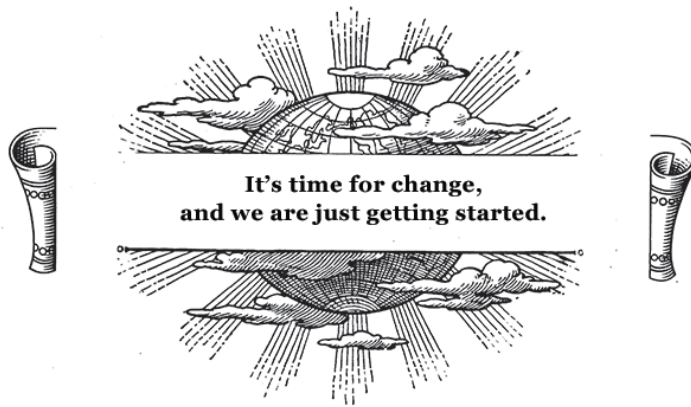
A Crowdfunding Contract

Recently, a Goldman Sachs analysis named the “Future of Finance” [12] described the importance of crowd funding and peer-to-peer lending in the evolution of the global macro economy. Smart Contracts are posited to further simplify and amplify crowd funding and peer-to-peer lending, with the potential to disrupt many aspects of the financial industry.

The legal costs of an initial public offering in terms of just documentation typically exceed \$100,000 [13]. Here is an example of an equity crowd funding Smart Contract created in less than an hour using less than 20 lines of code, that could dramatically reduce that cost:



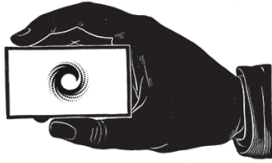
Such code could drastically change the transactional legal landscape. Long-winded drafts might become simple if — then statements and and a new occupational sector of computer programming legal counselors would be born.



Just as the industrial revolution and Internet brought about economic and societal change, so will further technological innovation enabled by decentralizing technologies. Blockchain technology harnessed by ConsenSys, and various other groups active in the space, has the potential to be that force of change.

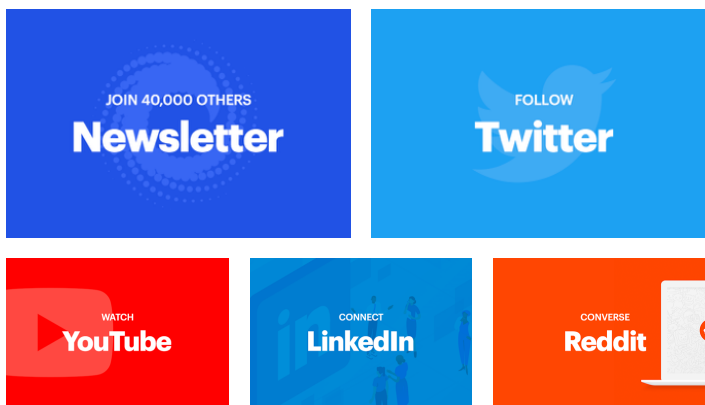
It is my hope that an era of decentralization brings forth a new world of opportunities, rights, and responsibilities to those who would not have had them previously.

Everything changes. Everything is connected. Pay attention.



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