

# Blockchains & Applications

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# Today's Talk:

1. Intro to Blockchain Technology
2. Video on Bitcoin
3. Summary of Bitcoin
4. Differences between Blockchain and Bitcoin
5. Applications of Blockchain in FinTech
6. Distributed ID

# What is Blockchain?

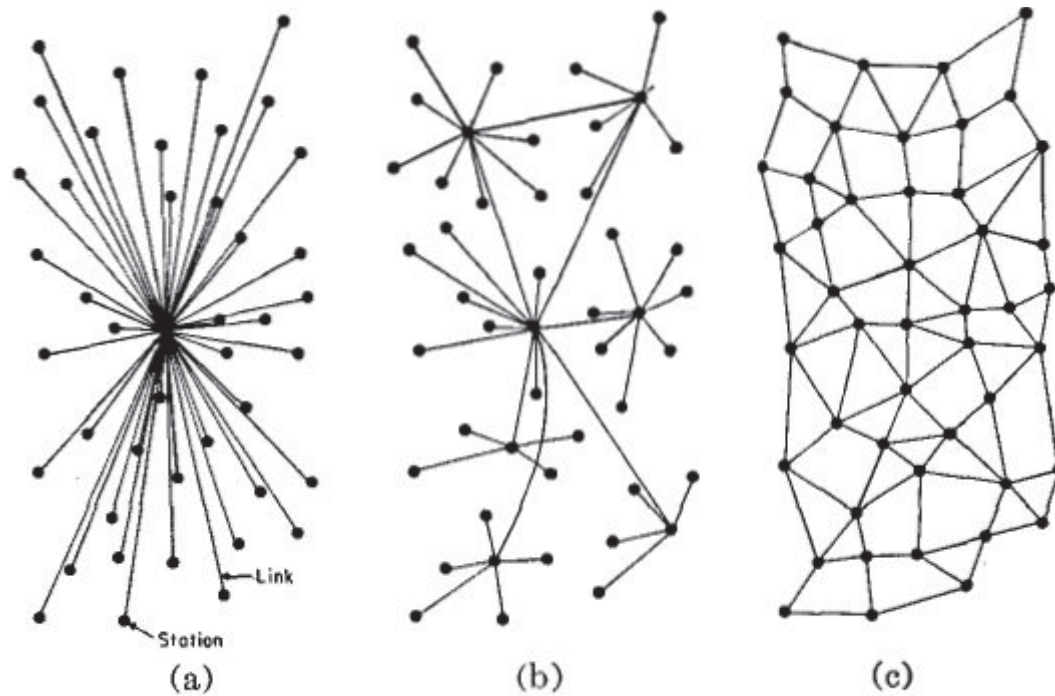
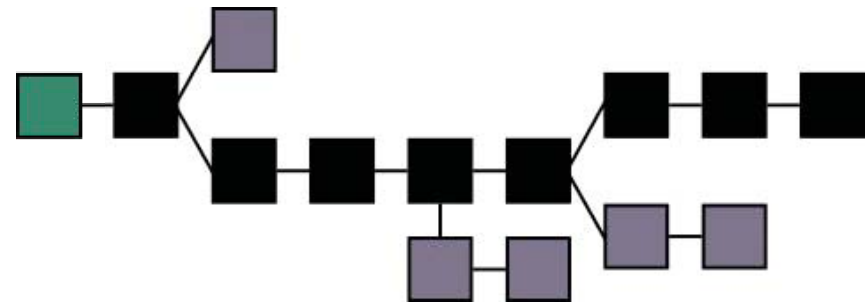
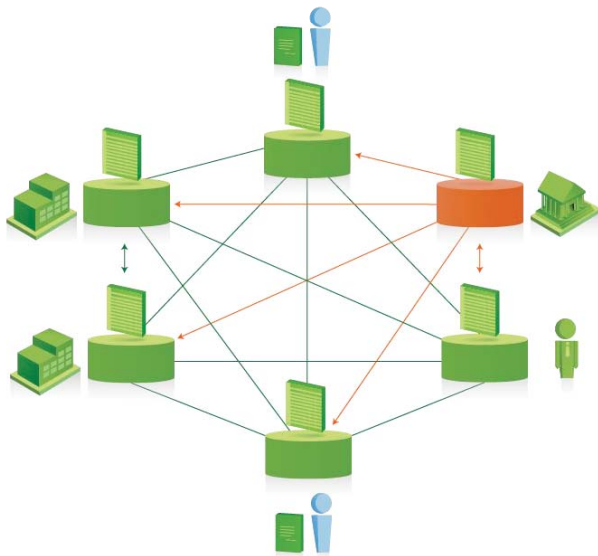


Fig. 1—(a) Centralized. (b) Decentralized. (c) Distributed networks.

# Visualization of a Blockchain

- “Single source of truth”
- Public Book of Records
- Decentralized & Distributed method of storing information



# Properties of a Blockchain

- Secure
- Immutable
- Transparent
- Decentralized
- Distributed



**What is Bitcoin?**



# Properties of Bitcoin

## Summary

- Decentralized
- Distributed Consensus - Proof of Work
- Peer to Peer Trustless transactions
- Asset that has monetary value

## Also...

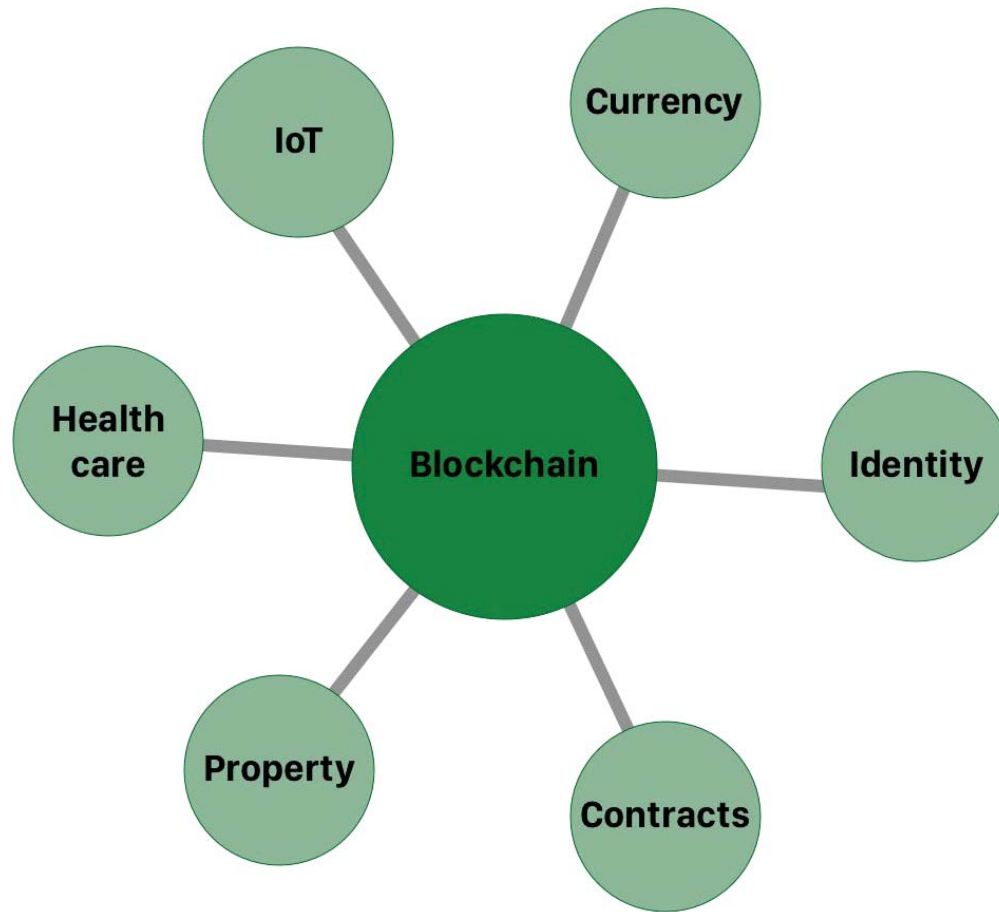
- 21M
- 10 min blocks
- Each coin is divisible by 100,000,000
- Pseudonymous

# Why is this important?

It's the next step...

1. Internet of Money
2. We have always had closed ledger book
3. Billion of unbanked, most people have access to internet
4. Inclusion of the entire world into financial industry

**Bitcoin ≠ Blockchain**





# Blockchain Applications



ETHEREUM

Ethereum is a development platform for the blockchain that enables decentralized applications using smart contracts.

**For example:**

- Machine to Machine
- Creative Ownership of Content
- Workflow Automation
- Digital Identity



- One of the first Ethereum applications
- Decentralized prediction markets - uses wisdom of the crowd
- Consensus is reached from oracles or reporters
- REP holders act as reports of events, get paid for reporting accurately and lose REP for reporting inaccurately
- Augur was one of the most crowdfunded campaigns of all time





Ripple is a distributed ledger that uses digital currencies to facilitate cross-border payments.

**Properties:**

- Closed Membership
- 5-10 Second Transaction Times
- PBFT Consensus
- No blockchain, mining, or smart contract functionality



## Workflow Automation on the Blockchain

- Sidechains
- Private transactions
- Admin control
- Interoperable



## Workflow Automation on the Blockchain

- Currently negotiating a contract to develop a POC with major North American financial institutions
- If this type of work interests you, please reach out afterwards

# DIID

## Our Problem

1. Financial Institutions alone are losing \$33B a year due to fraudulent activity
2. Banks and other institutions spend heavily to verify a user's reliability over time (KYC/AML)

# DIID

## Our Solution

1. Streamlining user verification and fraud detection for large enterprises
2. Track user transaction history to create a more accurate credit history.

# DIID

## Market Potential

In the process of evaluating

Currently negotiating a contract to apply our solution to 600 million users as a R&D sandbox. Estimated cost of \$5 per user

Success will allow us to build credibility and approach global financial enterprises

We would love your help defining the market size.

# Thanks

Any Questions?

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## Join BEN

- It's the best way to get started in the blockchain industry.
- We host global events that shine a spotlight on local initiatives





# Blockchain Gauntlet

- Throughout November, we are hosting a Blockchain accelerator



Sign up at - [blockchainedu.org/gauntlet](https://blockchainedu.org/gauntlet)

# Distributed Identity

We aim to solve:

1. Strengthen user verification and fraud detection for large enterprises
  - a. Payment and loan services
  - b. Insurance services
  
2. Tracking transaction history for users to create a more accurate credit history.
  - a. Assessing risk of a loan
  - b. Allowing financial assets to be represented on the blockchain

<https://www.lendingclub.com>

This example isn't done on the blockchain but the amount of Proof of Concepts I have seen based on this is asstonishing.

Essentially you sign up for the service allowing them access to credit score and online history and they grade you on a scale of risk. Your loan is then assigned a interest rate and put on the market. Investors have the chance at financing any amount they want for monthly returns.

# Distributed ID

As a person in 2016 you have given out private information to gain access to certain things. Whether it is info about yourself (Fbook) to gain access to the social pool that is facebook, or information about a device you have to gain access to a service (internet).

Every time you agree to the “Terms & Conditions” you are giving something away. This process is costly, time consuming and effectively inefficient. Simply because any service I have personally signed up with I have had to repetitively give out more information. Spreading my internet footprint wide is not a good tactic in this day and age.

We aim to change the dynamic of power without interrupting the User Experience. Current enterprises will use us as an identity layer to help track users. Our service will allow any user access to all companies using our service without having to share private information more than once. We create what we refer to as a web of trust, where Company A, B, C or D trusts us and we trust the user so therefore the companies trust the user. If there is a fraudulent transaction we are able to trace your information back to your account and submit it to the regulatory authorities.

Longer term we want to track the transaction data

# Limits

- 1mb block size
- Only 7 transactions per second
- Centralization
- Opportunity: Segwit, Lightning Network