



NINTH ANNUAL LEADERSHIP EVENT

CYBER SECURITY

Security solutions through collaboration.™ **SUMMIT**

October 28–30, 2019 | Minneapolis Convention Center

cybersecuritysummit.org | [#cybersummitmn](https://twitter.com/cybersummitmn)

Michael S. Anton – Sr. Product Manager



protiviti[®]
Face the Future with Confidence.



First Data[®]



KUDELSKI
SECURITY 

Agenda

- Brief History of Blockchain
- Blockchain in the Enterprise
- Security Focus



The point is...

- Blockchain will not solve all of your problems, but it does some things pretty well.
- The future of blockchain is still unclear.
- Security professionals beware.





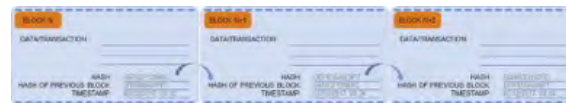
The Pirate Bay



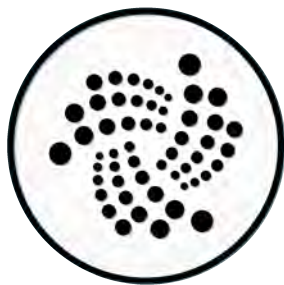


A blockchain is...

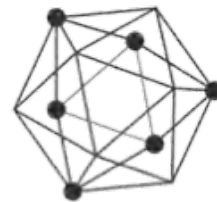
- **A ledger**
 - Record of all historical transactions
 - Details of new transactions are recorded as a new block
 - Each block contains the hash of the previous block, altogether forming a chain
- That is **distributed**,
 - Every participant to the blockchain P2P network has a copy of the ledger
- **Decentralized**,
 - No central authority to validate a transaction
 - Transactions are validated by some of the participants (called « miners » in bitcoin), based on a pre-defined consensus mechanism
- **Irreversible**
 - Being highly distributed and decentralized, transactions are not reversible
- Numerous variants exists to allow for e.g., alternative consensus mechanisms, private networks, integration of computational logical (smart contracts)



AION



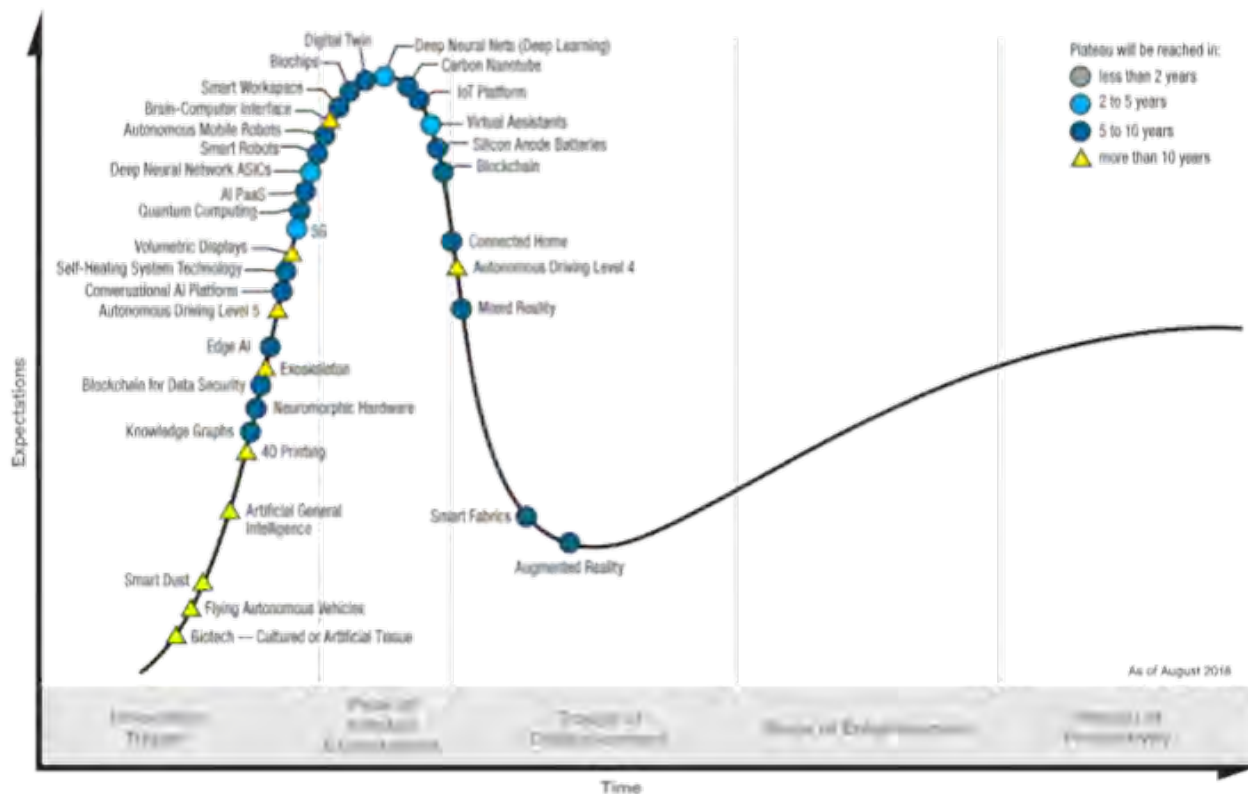
tz



corda



Hype Cycle for Emerging Technologies, 2018

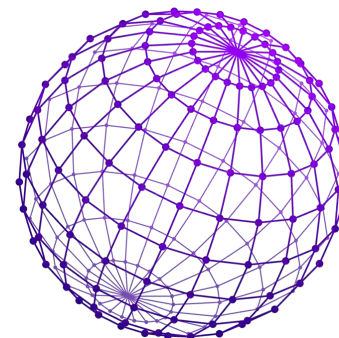
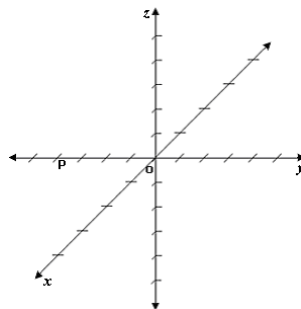
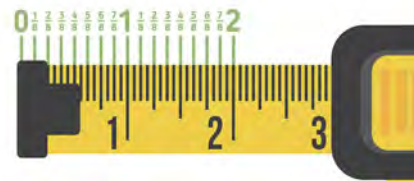


Hype Cycle for Blockchain Business, 2019



What's Next for Blockchain?

- Standardization
- Scalability
- Interoperability





Enterprise Blockchain Implementation Plan

Blockchain Business Benefits



- **Efficiency**

- No central authority or intermediary delaying settlement
- No duplication of efforts (one single ledger for all parties)
- Automatic enforcement of business rules with smart contracts



- **Auditability / traceability**

- Immutable transaction history



- **Transparency / trustless**

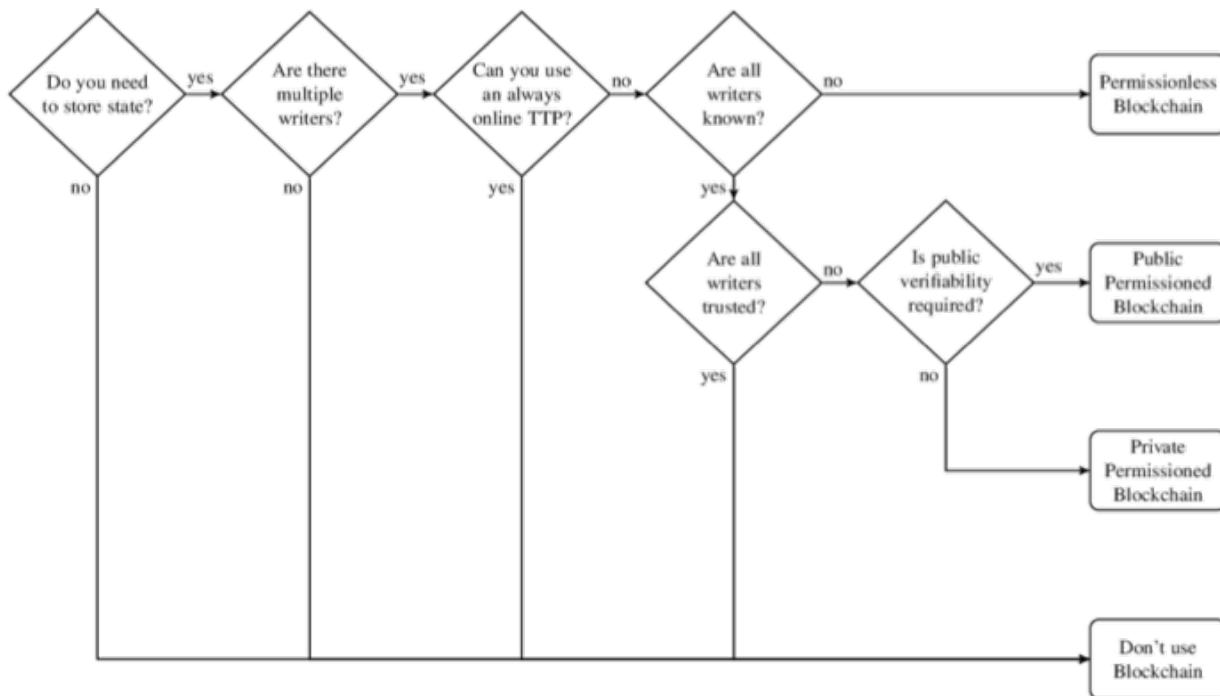
- No need to trust the other transacting parties, or a central authority



- **Security**

- Guaranteed by cryptographic schemes (signatures, proof-of-work, etc.)

Do you *need* a blockchain?



"Long Blockchain Corp" shares soar

Long Island Iced Tea Corp (LTEA:NASDAQ)

USD

Extended Hours

Last | 4:04:27 PM EST

Close | 4:00:00 PM EST

6.84 -0.08 (-1.1577%)

6.91 +4.47 (183.20%)

5 Day



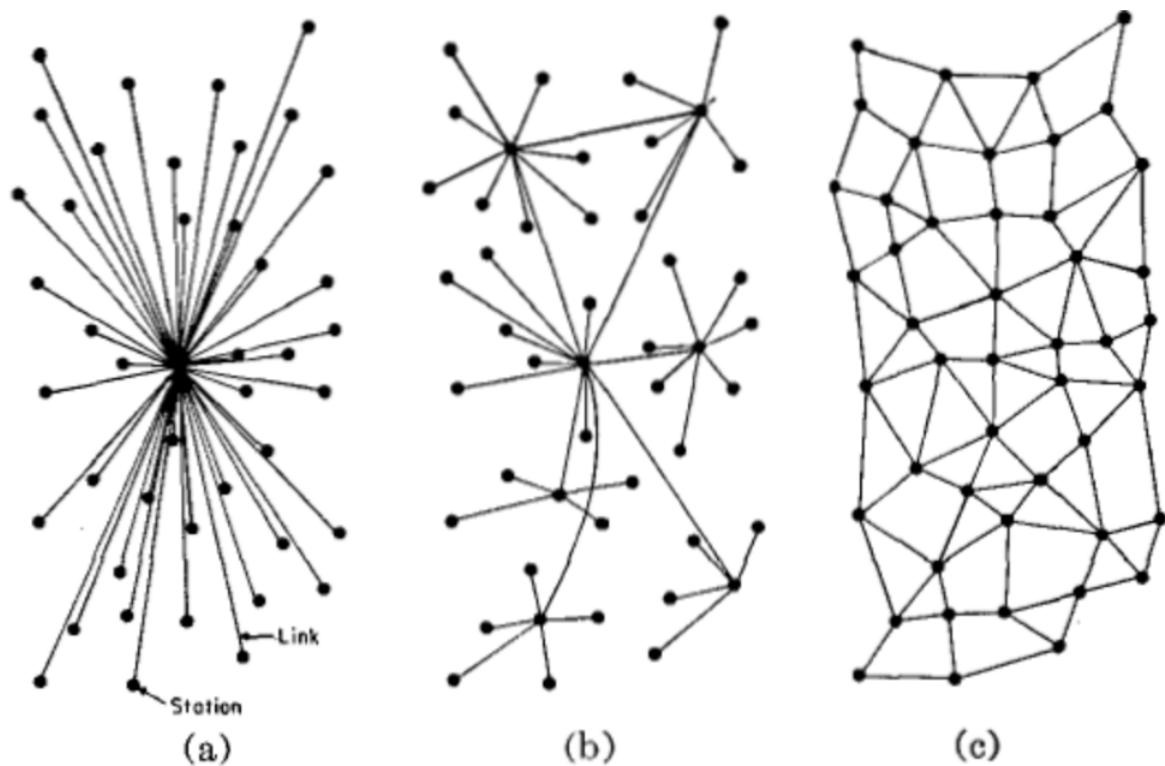
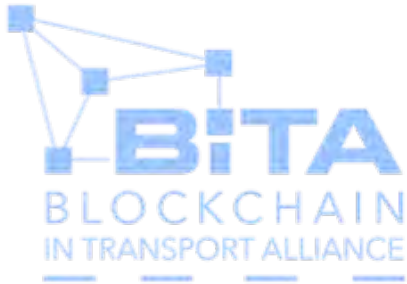


Fig. 1—(a) Centralized, (b) Decentralized, (c) Distributed networks.

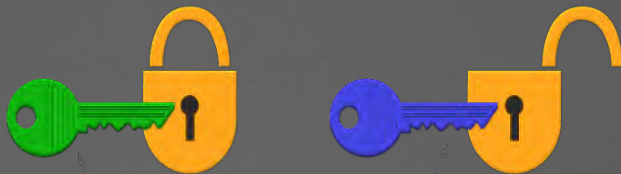
Blockchain Use Case - BiTA



Blockchain Use Case - Libra



PASSWORD



Blockchain Security Incident #1



ethereum
classic



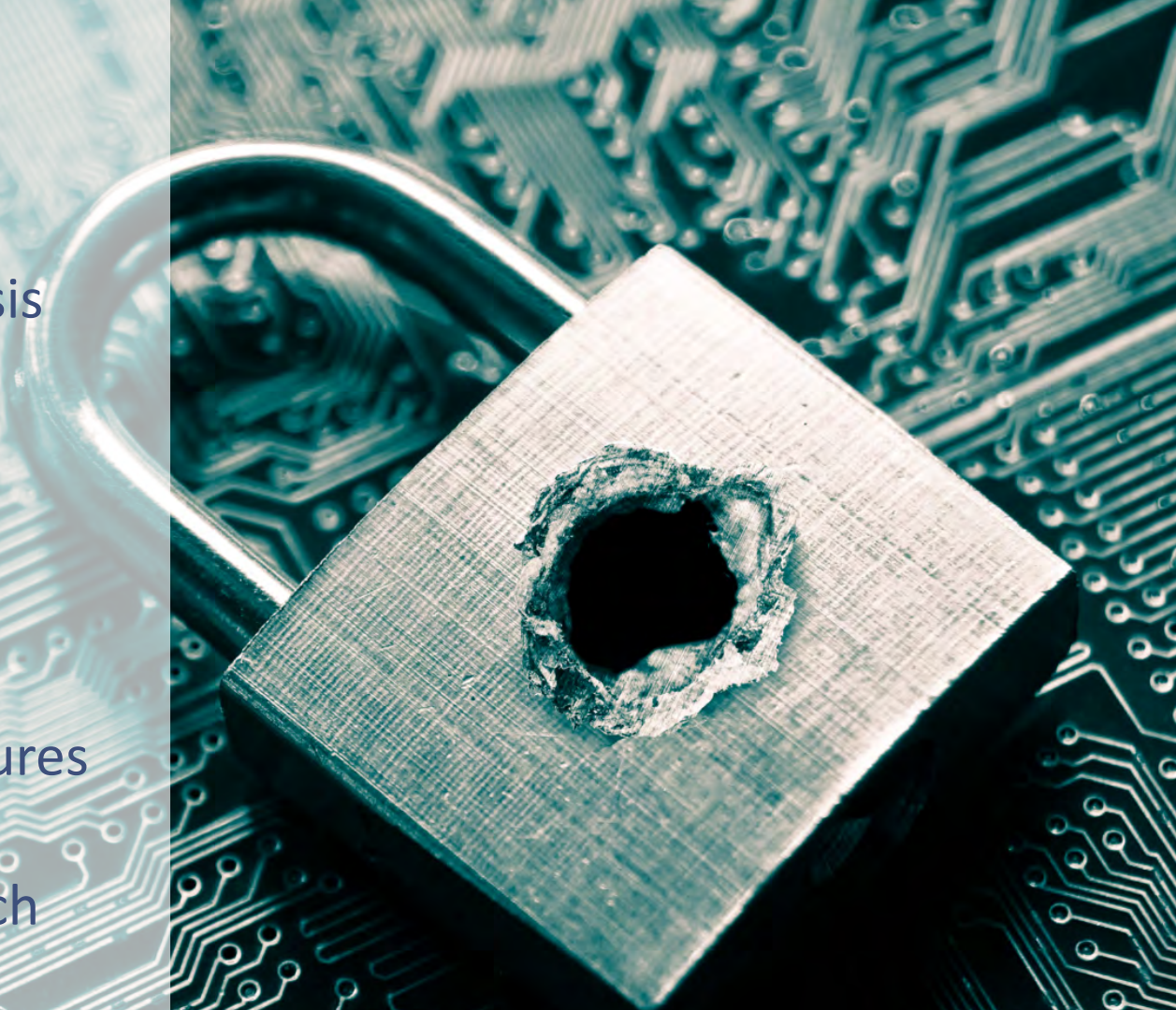
Blockchain Security Incident #2



Blockchain Security Incident #3

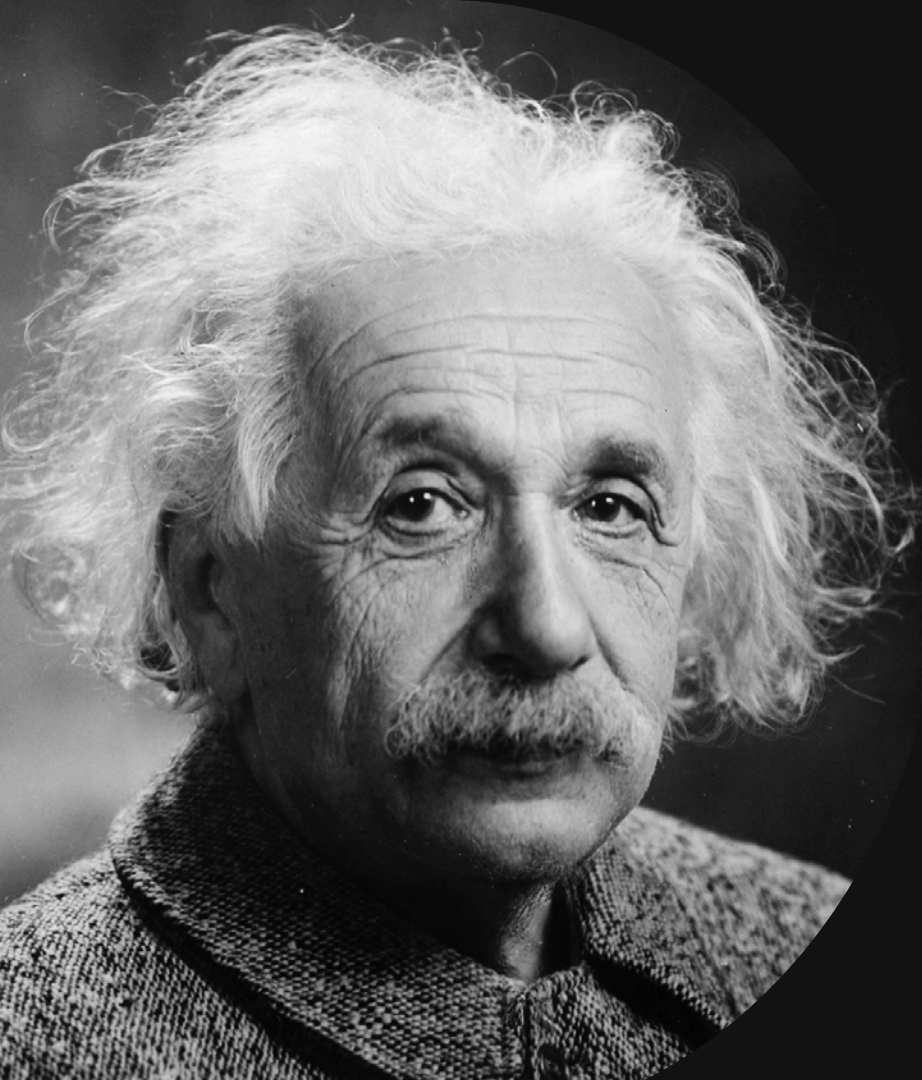


- Code Review
- Crypto/Math Analysis
- Pen Test
- Audit coverage
- Full-Stack Architectures
- Build on existing Tech



The point is...

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- The future of blockchain is still unclear.
- Security professionals beware.



“
Everything
should be made
as **secure** as possible.
especially **blockchain.**”

Albert Einstein



A close-up photograph of a cracked concrete surface. The crack runs diagonally from the bottom left towards the top right. The concrete is a light grey color with some darker spots and texture. The lighting is soft, creating subtle shadows in the crack.

Truth

Trust

Thank You

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