BLOCKCHAIN - AN ECOSYSTEM GAME

Generoso Cogliano

Managing Director

generoso.cogliano@accenture.com

Prague, Sep 25th 2019

WHERE ALL BEGAN

FROM BITCOIN…

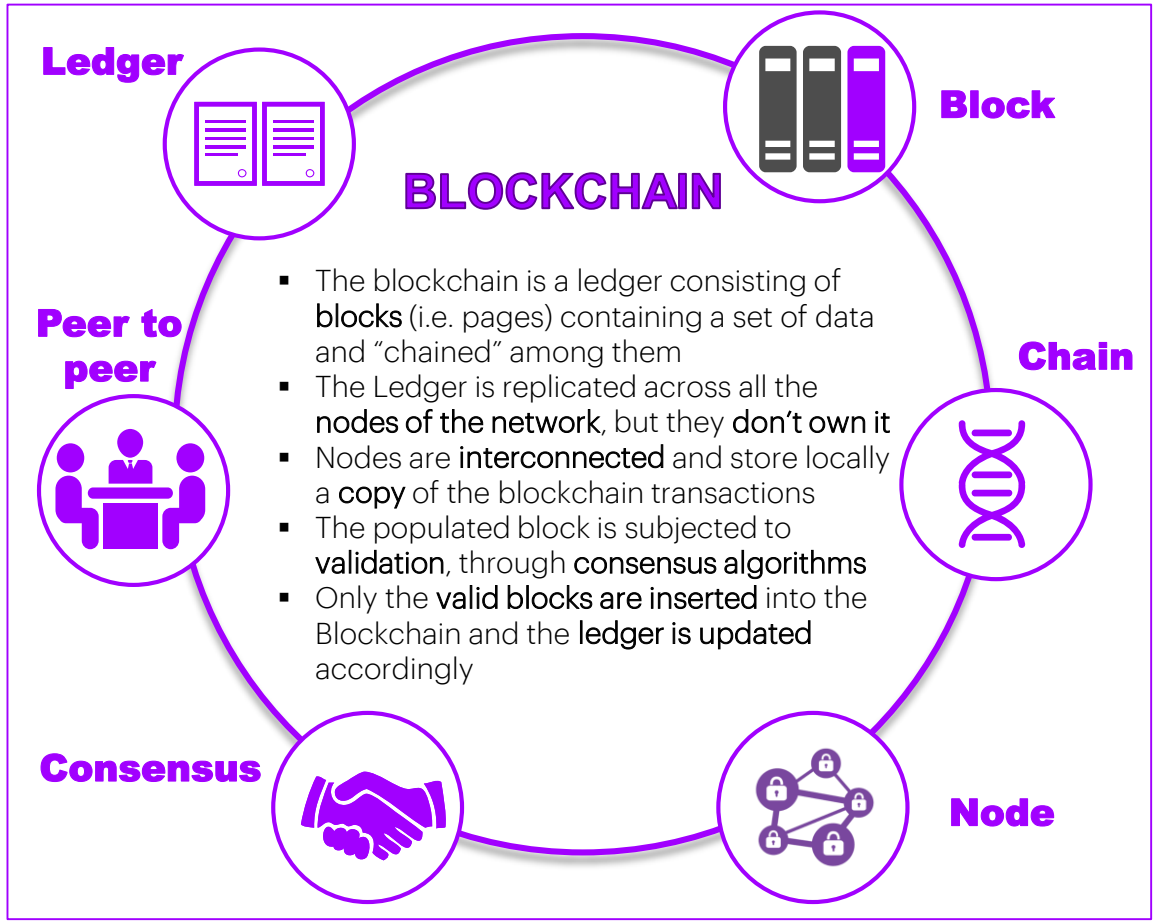
Bitcoin: A Peer-to-Peer Electronic Cash System

Satoshi Nakamoto
satoshin@gmx.com
www.bitcoin.org

October 2008

Abstract. 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. Digital signatures provide part of the solution, but the main benefits are lost if a trusted third party is still required to prevent double-spending. We propose a solution to the double-spending problem using a 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 longest chain not only serves as proof of the sequence of events witnessed, but proof that it came from the largest pool of CPU power. As long as a majority of CPU power is controlled by nodes that are not cooperating to attack the network, they'll generate the longest chain and outpace attackers. The network itself requires minimal structure. Messages are broadcast on a best effort basis, and nodes can leave and rejoin the network at will, accepting the longest proof-of-work chain as proof of what happened while they were gone.

… TO BLOCKCHAIN



- The blockchain is a ledger consisting of **blocks** (i.e. pages) containing a set of data and "chained" among them
- The Ledger is replicated across all the **nodes of the network**, but they **don't own it**
- Nodes are **interconnected** and store locally a **copy** of the blockchain transactions
- The populated block is subjected to **validation**, through **consensus algorithms**
- Only the **valid blocks are inserted** into the Blockchain and the **ledger is updated** accordingly

Copyright © 2019 Accenture. All rights reserved.

PROMISE AND FORWARD LOOKING

IMAGINE A WORLD

Financial institutions **settle payments and securities in minutes** instead of days

Insured assets and related risks are monitored real-time, events captured and contracts executed autonomously

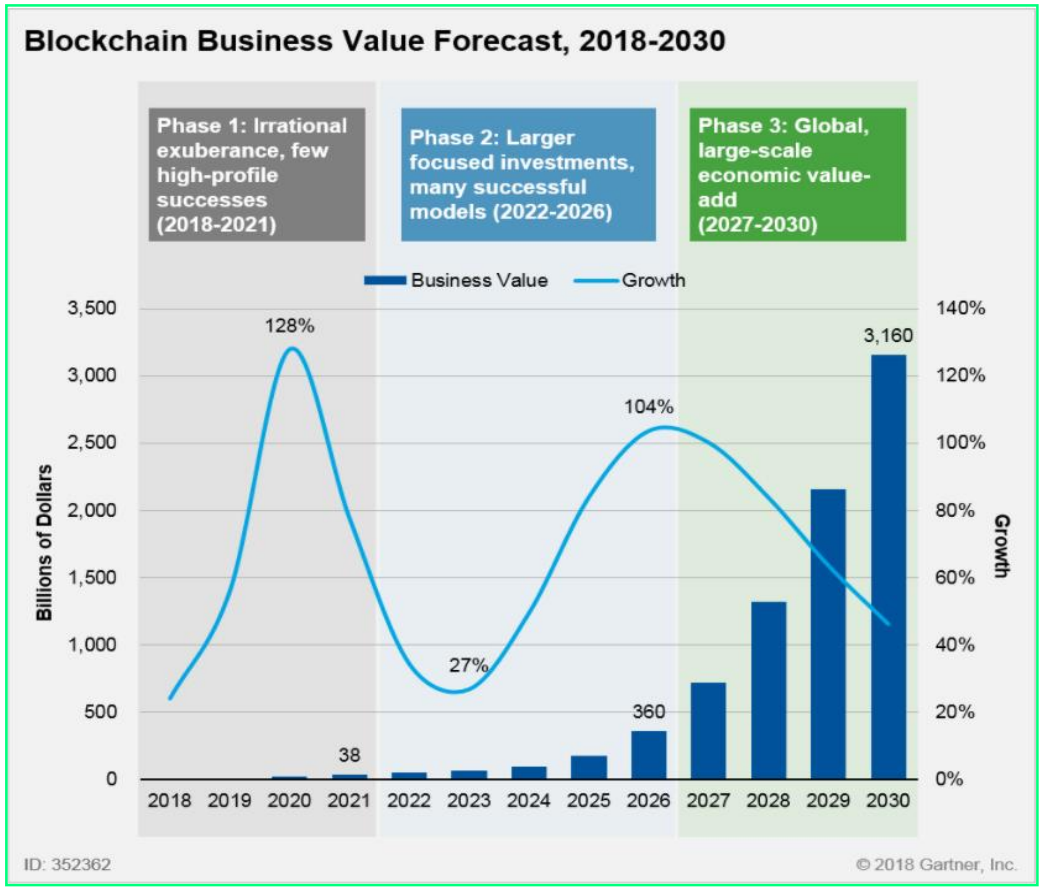
Manufacturers **track the origin and movements** of inventory across a supply chain

Authors **sell content directly** to the final customer, reducing barriers for new entrants and frauds

Producers and consumers **digitally exchange energy**, with certification of origin

We take **full control of our digital identity** and how data is managed by third parties

GARTNER PREDICTIONS



Copyright © 2019 Accenture. All rights reserved.

SUMMARY OF BENEFITS AND CHALLENGES

Why it can be disruptive

Speed
- The exchange of data can potentially be instantaneous, near real time

Efficiency
- Operational costs and complexity are progressively lower

Transparency
- Transparency for regulatory purposes is increasing

Security
- Data immutable and logged transactions cannot be altered

Decentralization
- No need for central authority or intermediaries, depending on the consensus mechanisms

Key challenges for a wide application

Scalability
- Apply solutions which can handle relevant volumes

Implementation
- Establish overall accepted standards and administration interfaces

Safety
- Implement solutions able to prevent cheating by one or more participants

Privacy
- Balancing the confidentiality and traceability of data, transactions and users

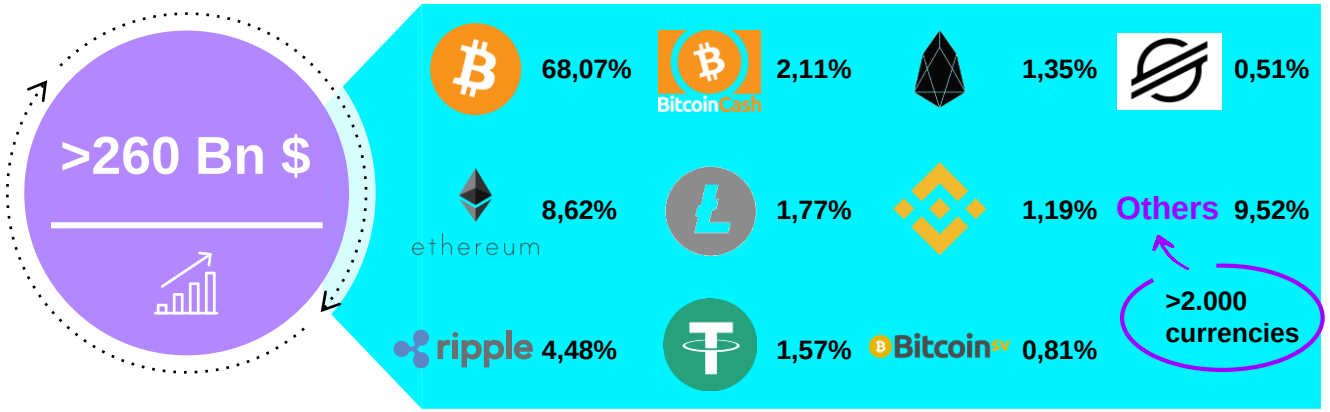
Regulation
- Defining a regulatory framework which can manage the Authority expectations

*D.L.T. have the potential to drive **semplicity and efficiency** trought financial services infrastructure and processes, but its applications **will differ by use cases** (leveraging the techonology in different ways for differen benefits) and will require deep **collaboration between incumbents, innovators and regulators***

Copyright © 2019 Accenture. All rights reserved.

HOW ABOUT CRYPTOCURRENCY

Market cap



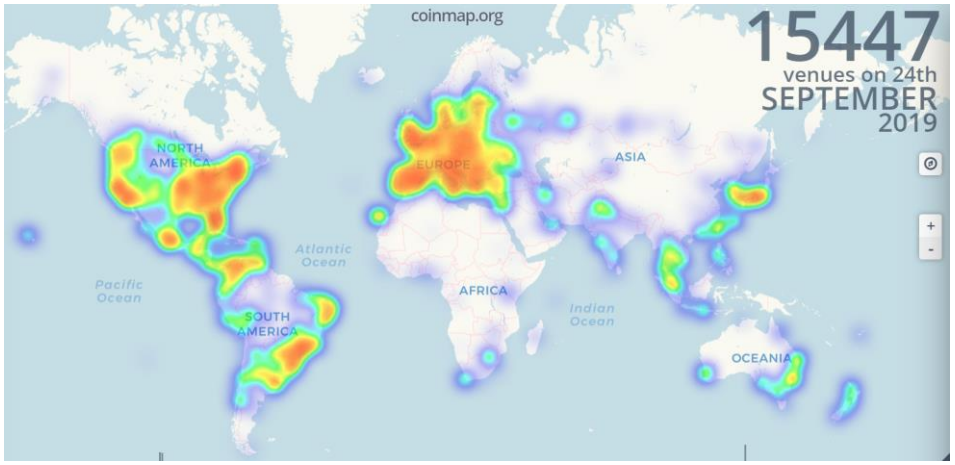
Source: Coinmarketcap (as of September 23, 2019)

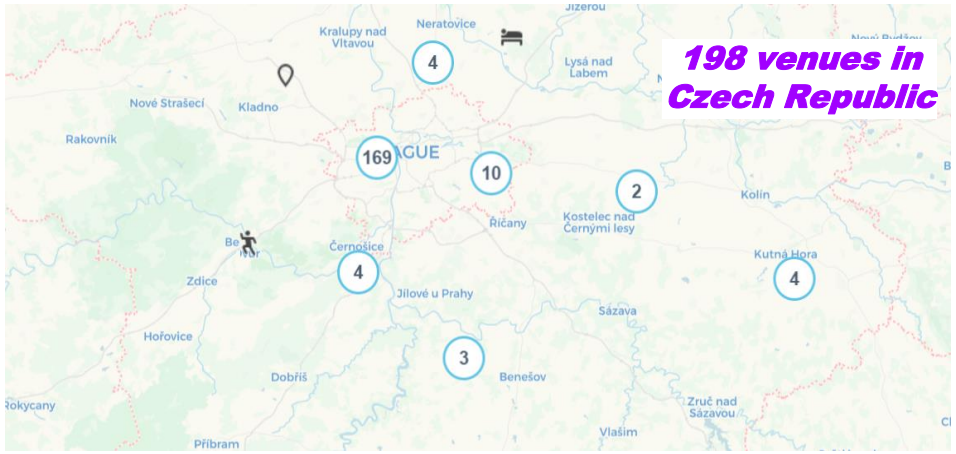
Bitcoin blocks

Height	Relayed by	Size (B)	Reward
596,197	Huobi Pool	1,330,914	12.73011188 BTC
596,196	ANTPOOL	1,356,217	12.74198189 BTC
596,195	ViaBTC	1,207,987	12.94179105 BTC
596,194	f2pool	1,606,006	12.70230056 BTC
596,190	SpiderPool 蜘蛛矿池	1,184,666	13.05180146 BTC

Source: BTC.com

Bitcoin venues





Source: Coinmap.org

Copyright © 2019 Accenture. All rights reserved.

BLOCKCHAIN AND SOCIAL MEDIA

Decentralized and distributed ledger that can be used to secure data by encrypting them, with advances in privacy and user anonymity. Also a cryptocurrency can be set to buy content and pay for services

OBSIDIAN

Obsidian messager uses Stratis-based blockchain and the system stores data in a decentralized system and the **data is not used for analytics and advertising**.

INDORSE

Indorse is the **equivalent of LinkedIn** on top of Ethereum blockchain but with its economy own and currency. You can create your own content and own all rights, build your profiles and connections, and get paid for your contributions.

NEXUS

Founder Jade Mulholland has said they aim to "**eliminate all invasion of privacy** that large corporations are currently performing.“,

STEEMIT

Steemit runs on top of a decentralized network known as Steem. It supports **community building and social interaction with cryptocurrency rewards** and users get paid for their posts.

Copyright © 2019 Accenture. All rights reserved.

BLOCKCHAIN AND ART MARKET

Blockchain could help to solve the problem of duplicated and pirated contents introducing the "digital scarcity": issuing a limited number of copies and tying them back to unique blocks proving their ownership.

MAECENAS

Maecenas is the first open **blockchain platform that democratizes access to Fine Art**. The platform offers art investment without intermediaries,

ART COLLECTIVE

Blockchain Art Collective is a growing movement of artists using the blockchain to verify a work of art's origin, authenticity, and journey.

DADA.NYC

DADA.nyc provide a decentralized marketplace where you can buy **limited-edition digital artworks with IP protection and proof of ownership**.

VERISART

using decentralized technologies, Verisart wants to **help artists and collectors with new ways to certify, document, verify and enliven their works**.

Copyright © 2019 Accenture. All rights reserved.

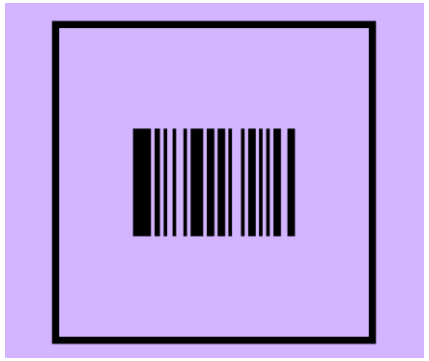
POTENTIAL BUSINESS DISRUPTIONS

NOT EXHAUSTIVE

SHARED DATA

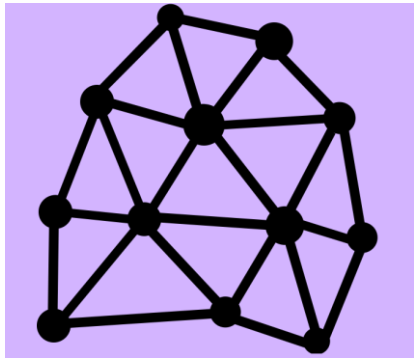
- Data Reconciliation
- Clearing/Settlement
- Payments
- Loyalty Points
- Audit and compliance
- …

SUPPLY CHAIN



- Trade Finance
- Supply Chain Financing
- Traceability
- Authenticity
- …

DISTRIBUTED EXECUTION



- Smart Contracts
- Real time gross settlement
- Letter of credit
- Syndicated Loans
- …

DIGITAL IDENTITY

- Customer onboarding
- AML / KYC
- Data Monetization
- CV certification
- …

Copyright © 2019 Accenture. All rights reserved.

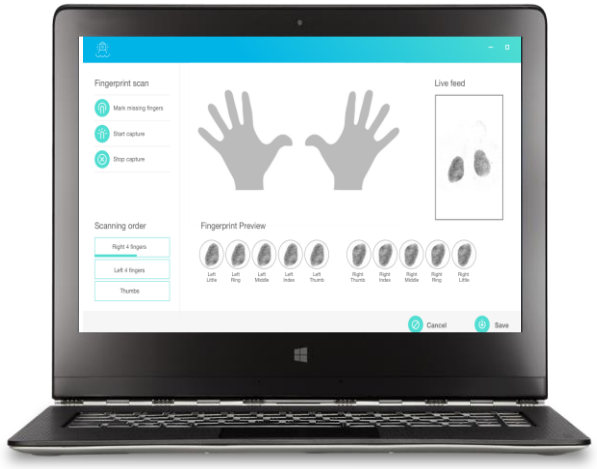
ID 2020

Biometric technologies

Blockchain technology

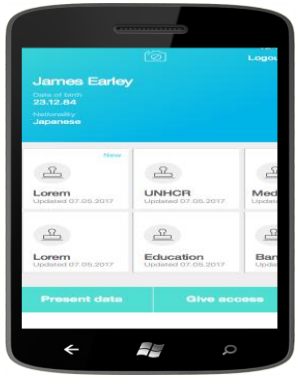
Distributed identification

Biometric enrolment



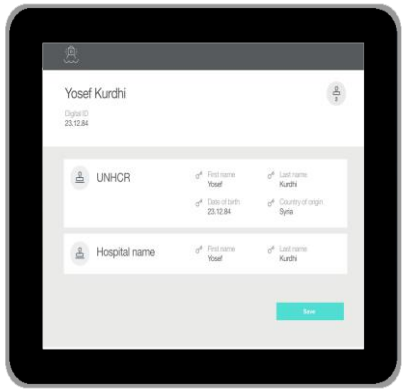
Accenture's Unique Identity Service Platform is used to **enroll and de-duplicate users' biometrics** that would be linked to the identity records

Mobile App



Platform used to allow a person to create a **unique profile** and capabilities through which they can manage and share their own data securely

3rd party app

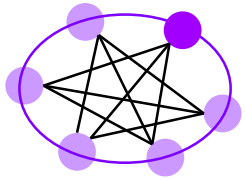
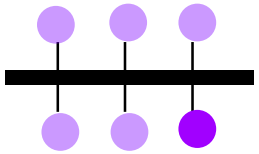
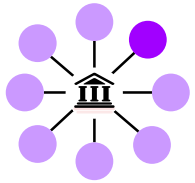


The application enables the organization to **capture, view, request and process** the data selectively shared by the user

Copyright © 2019 Accenture. All rights reserved.

AN ECOSYSTEM GAME

A new way to collaborate within industry and cross-industry will be required

DIFFERENT COLLABORATION MODELS	INTERNAL	CONSORTIUM OF PEERS	SUPPLY CHAIN	ECOSYSTEM
				
APPROACH	Innovation, Learning	New Industry Ecosystems	Industry Platforms	Systemic Initiatives
CURRENT FOCUS	Contracts, Reconciliations	Trade Finance, Payments	Goods tokenization	Money, Identity, Public Services
EXAMPLES	▪ Inter-company reconciliations ▪ Employees skills certification	▪ International agreements, payments ▪ Trade Finance ▪ Reinsurance	▪ Traceability ▪ Internet of things ▪ Payments	▪ ID 2020 ▪ We.trade ▪ Central Banks

Copyright © 2019 Accenture. All rights reserved.