Blockchain Identity - Too Good to be True?

CEESCA
September 2016
Consult Hyperion...
The Beginning: Bitcoin

The marketing campaign for the blockchain
Wait, What?

UNICEF Eyes Blockchain As Possible Solution to Child Poverty Issues

Stan Higgins | Published on February 3, 2016 at 19:16 GMT

R3 connects 11 banks to distributed ledger using Ethereum and Microsoft Azure

By Ian Allison

Bitcoin Banker Cryptsy Gets Cracked: $5.7 Million Grabbed and Gone

By Douglas Bonderud | January 19, 2016

How blockchain tech could change the way we do business
And...

How the Technology Behind Bitcoin Could Provide a Tech Revolution for the Fire Service.

Posted on Feb 4, 2016

Couple to Get Married on the Bitcoin Blockchain at Disney Bitcoin Conference
Investments in Bitcoin & Blockchain

Total (summer 2016): $1.15 bln
Number of start-ups: 800+

Sources: CoinDesk, VentureScanner, Cbinsights, R3CEV
Adoption curve. July 2016

Perceived value

Blockchain

Peak of Hype & Expectations

Enlightenment & Triumph

Trough of Disappointment

Technology discovery

Adoption & Productivity

Maturity
Blockchain space: traction

In Q1 2016 Blockchain start-ups overtook Bitcoin in total VC investment for the first time.

In 2016 Ethereum has been getting a lot of traction.

<table>
<thead>
<tr>
<th></th>
<th>Market cap</th>
<th>Price</th>
<th>Growth since Jan 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bitcoin</td>
<td>$10 bln</td>
<td>$600</td>
<td>40%</td>
</tr>
<tr>
<td>Ethereum</td>
<td>$1 bln</td>
<td>$12</td>
<td>1300%</td>
</tr>
<tr>
<td>Ripple</td>
<td>$0.2 bln</td>
<td>$0.005</td>
<td>10%</td>
</tr>
</tbody>
</table>

Sources: Coinmarketcap, Coindesk
Why now?

Moore’s Law, Metcalfe’s Law and Reed’s Law

- **Centralise**
  - One copy of the transaction ledger

- **Decentralise**
  - One copy of the ledger spread over several computers

- **Distribute**
  - Many copies of the ledger spread over many computers

- **Replicate**
  - Every computer has a copy of the transaction ledger
Not Bitcoin, Not Blockchain –
Shared ledgers
"Blockchain" is an implementation choice of shared ledger technology.
What’s new in architecture?

**Contract**
How can we animate the immutable record so that events trigger actions?

**Consensus**
How do we agree the immutable record of transactions?

**Content**
What kinds of assets will be in the transactions?

**Communications**
Which entities create and propagate transactions?

Shared Ledger Applications

"Consensus Computer"

Shared Ledger
Of course, FISH!

Guardian sustainable business
what if? economics

Blockchain technology trialled to tackle slavery in the fishing industry

Technology could be used to differentiate fish caught sustainably to those caught illegally, or linked to human rights abuses
Diamonds

Everledger To Use Blockchain Technology For Insurance Purposes

2015-08-03 08:59 AM | Alex William

Airbnb Exec Hints at How Rental Giant Could Use Blockchain

Stan Higgins (@mpmcsweeney) | Published on March 8, 2016 at 18:20 BST

One of Airbnb’s co-founders has indicated that the popular renting service is interested in potential blockchain applications that could improve user trust.

The comments were issued by co-founder and CTO Nathan Blecharczyk in a recent interview in which he discussed the company's plans for 2016.

City AM writer Harriet Green said that the

Identity of things

Source: IBM
Personal ID attributes

Your Next Passport Could Be On The Blockchain

Posted Oct 31, 2014 by John Biggs (@johnbiggs)

Source: TechCrunch
How to understand if blockchain is at all relevant?

Key characteristics

- Many writers
- Immutable history
- Transactional nature
- Limited trust
- Degree of transparency
How to understand if we are solving the identity problem?

Think of three components:

Identification
Authentication
Authorisation
admittance would be barred by massive doors, but workers would be provided fresh air by means of modern ventilating systems.

Details of the suggested glass bank. Note that passers-by on the street have a full view of what is going on inside the building, and can thus give warning if a hold-up is in process. However, even if bandits attempted a hold-up, their loot would be small, insomuch as tellers in the glass bank would keep only a small amount of cash at hand. Money vaults would be hidden underground, and communication would be effected through a pneumatic tube system as illustrated in drawing above.

Inventions for August
Trust is a serious problem, we have to get to a new level of transparency – only through radical transparency will we get to radical new levels of trust (Marc Benioff, Davos 2015)
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