

Blockchain: Applications for Registries?



Julian Lamb, Director, Companies Registry, Jersey

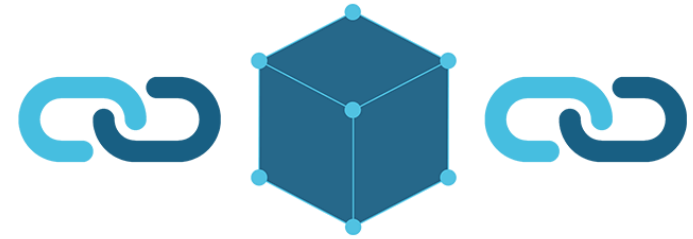
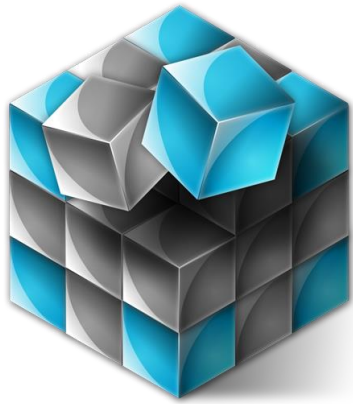
Mehmet Munur, Partner, Tsibouris & Associates, LLC

Gary Walsh, Senior Manager, ERS

Overview

1. Julian Lamb – Registry, innovation, and Blockchain
2. Gary Walsh – Blockchain and how it works
3. Mehmet Munur – Blockchain and legal challenges

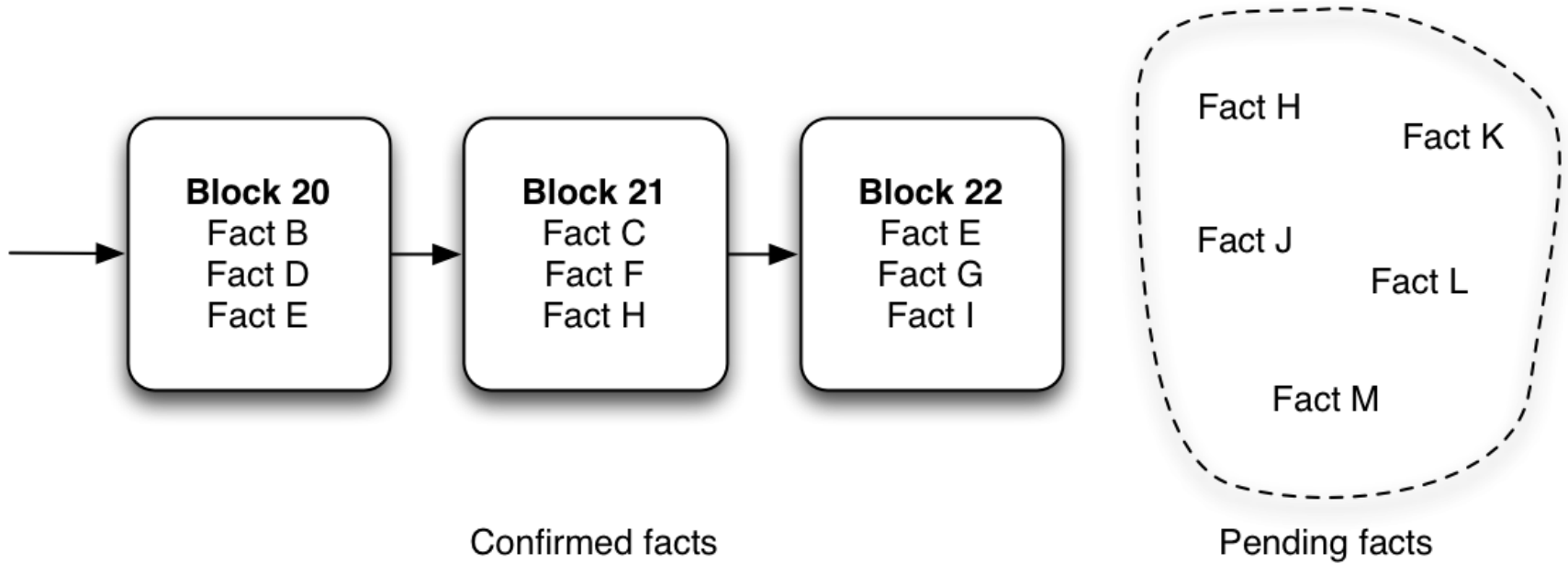
Registry, Innovation, and Blockchain



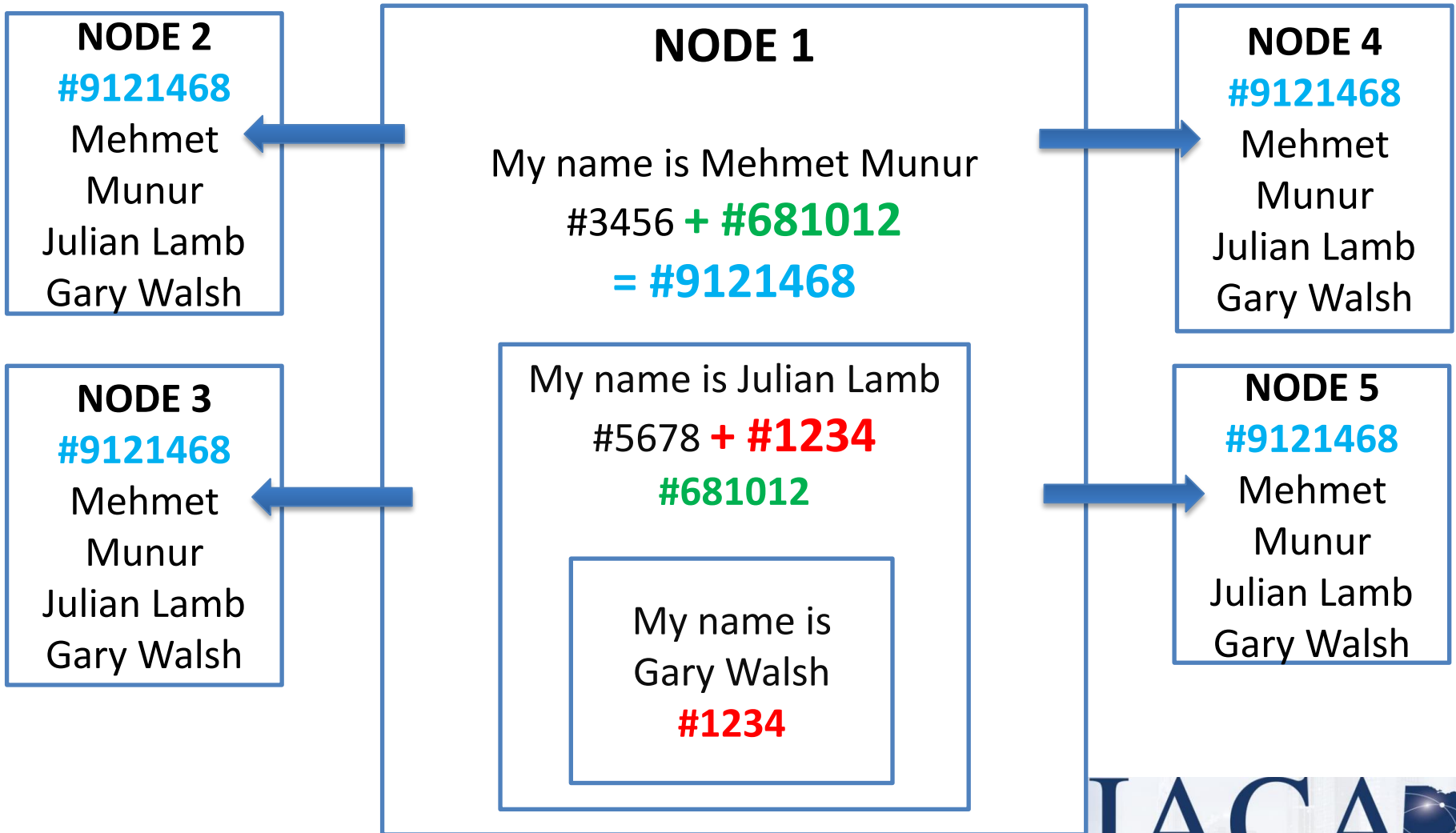
What is Blockchain?

A Blockchain is a distributed, tamper-proof ledger of facts

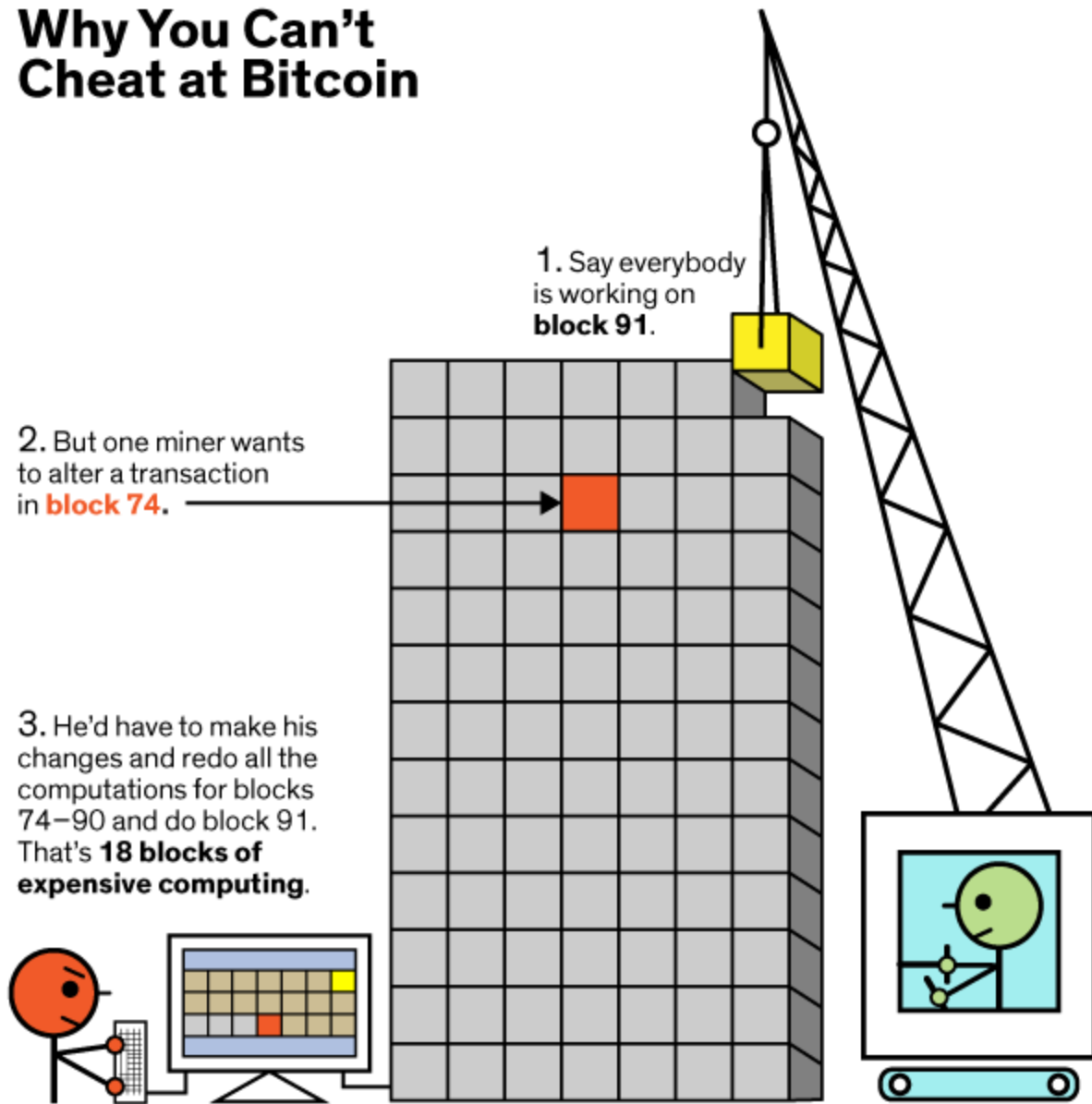
Blockchain



Immutability



Why You Can't Cheat at Bitcoin



1. Say everybody is working on **block 91.**

2. But one miner wants to alter a transaction in **block 74.**

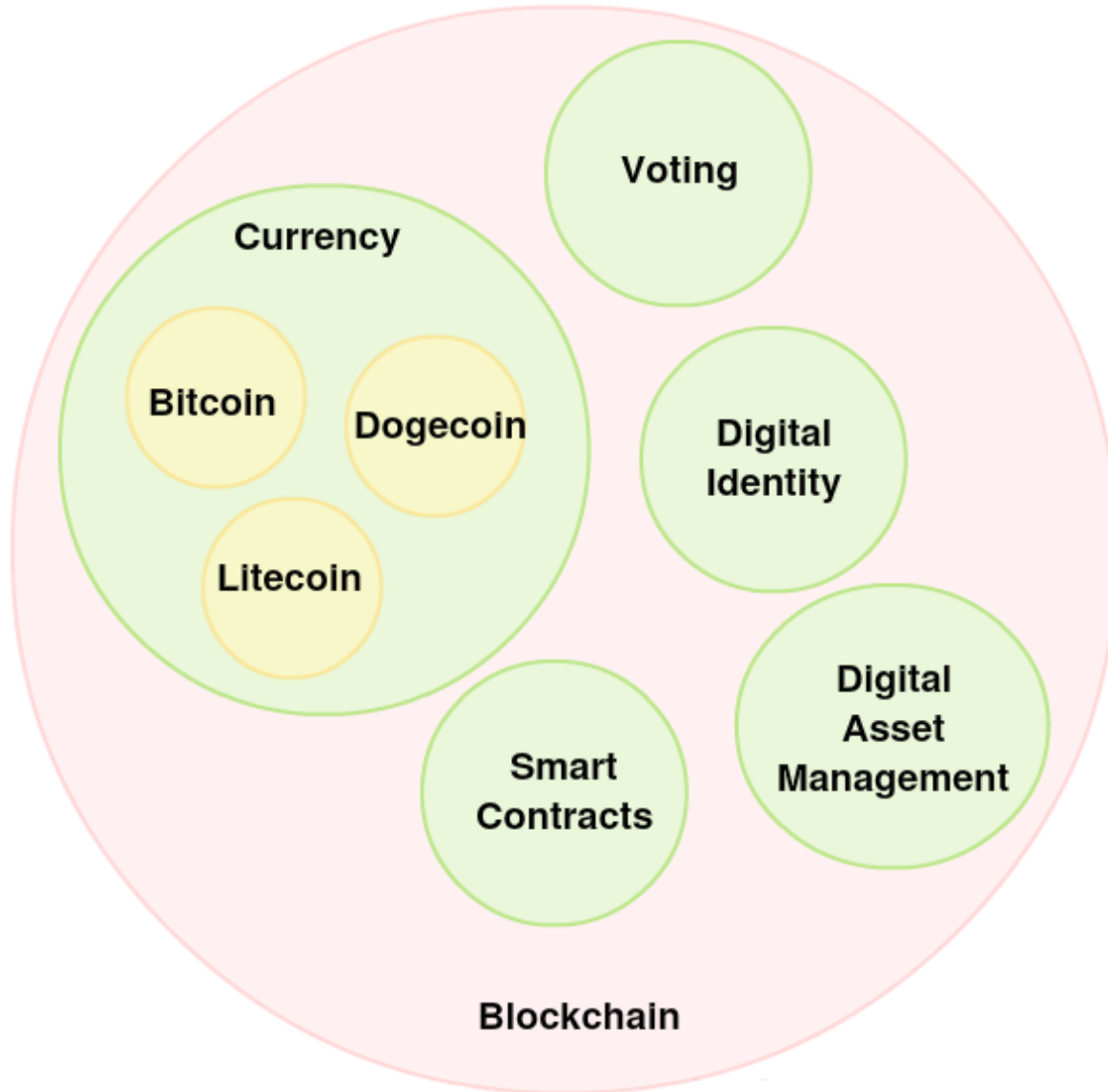
3. He'd have to make his changes and redo all the computations for blocks 74-90 and do block 91. That's **18 blocks of expensive computing.**

4. What's worse, he'd have to do it all **before** everybody else in the Bitcoin network finished **just the one block (number 91)** that they're working on.

Public –v- Private

- Public can be read and modified by anyone
- Private requires special permissions
- Unique challenges

Blockchain Use Cases



Smart Contracts

- Pre-written logic
- Stored and replicated on Blockchain
- Executed by network of computers
- Results in ledger update

Blockchain & Registry

- What is wrong with current model?
 - Corruption / Trust
 - Speed
 - Centralisation
 - Cost of operation

“The pointless Blockchain”

“If trust and robustness aren’t an issue, there’s nothing a blockchain can do that a regular database cannot.”

Dr. Gideon Greenspan, CEO MultiChain

“If your requirements are fulfilled by today’s relational databases, you’d be insane to use a blockchain.”

Dr. Gideon Greenspan, CEO MultiChain

Honduras

“In the past, Honduras has struggled with land title fraud. The country’s database was basically hacked. So bureaucrats could get in there and they could get themselves beachfront properties.”

Factom President, Peter Kirby



Honduras

“When the Honduran police came to evict her in 2009, Mariana Izaguirre had lived in her lowly house for three decades. Unlike many of her neighbours, she even had an official title to the land on which it stood. But the records at the country’s Property Institute showed another person registered as its owner, too—and that person convinced a judge to sign an eviction order. By the time the legal confusion was finally sorted out, Ms Izaguirre’s house had been demolished.”

Source: economist.com



Registry Use Cases

- Land titles
- Secured Transactions – Smart Contracts
- Estonia - Register of Wills
- Estonia – Health records
- Australia – Stock Exchange

Regulation

- Accountability / Responsibility
- Jurisdiction of the transaction
- Smart contracts – Contract law
- Consumer protection

Challenges - Technical

- Maturity
- Staff expertise
- Replacing existing infrastructure

Legal Challenges

- Importance of existing legal frameworks
- Identification challenges
- Contractual challenges
- Security challenges
- Privacy challenges

Bitcoin Lessons



Existing legal frameworks

Blockchain implementations must comply with existing legal frameworks—whatever they may be.



Identification Issues

- Identification and fraud issues
- Satisfying regulatory requirements
- Know Your Customer obligations (OFAC, SDN and related)



Contractual Issues

- Licenses (Open Source or Proprietary)
- Systemic Changes (forks)
- Terms of Use
- Privacy Policies
- Electronic Signatures
- Obtaining Consent



Security Issues

- Systemic security issues
- Transactional security issues
- Security issues relating to wallets or repositories



Privacy Issues

- Configuration issues
- Obligations relating to data breaches



Questions & Answers

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