BLOCKCHAIN IS WAY BIGGER THAN THE HYPE

ARMA-DENVER
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KAHN CONSULTING INC.

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WHAT MATTERS TO IM?

- Integrity
- Control
- Completeness
- Immutability
- Access
- Retrievability

WHAT IS BLOCKCHAIN?

- "Blockchain is a type of distributed ledger in which value exchange transactions (in bitcoin or other token) are sequentially grouped into blocks. Each block is chained to the previous block and immutably recorded across a peer-to-peer network, using cryptographic trust and assurance mechanisms."

ISN'T BLOCKCHAIN SYNONYMOUS WITH CRYPTOCURRENCIES?

My argument to the audience was the one I usually give: they should simply ignore the currency use-case: it's the least interesting thing about Bitcoin. They should, instead, look at it as a platform for decentralized value-exchange and focus on the opportunities this enables.

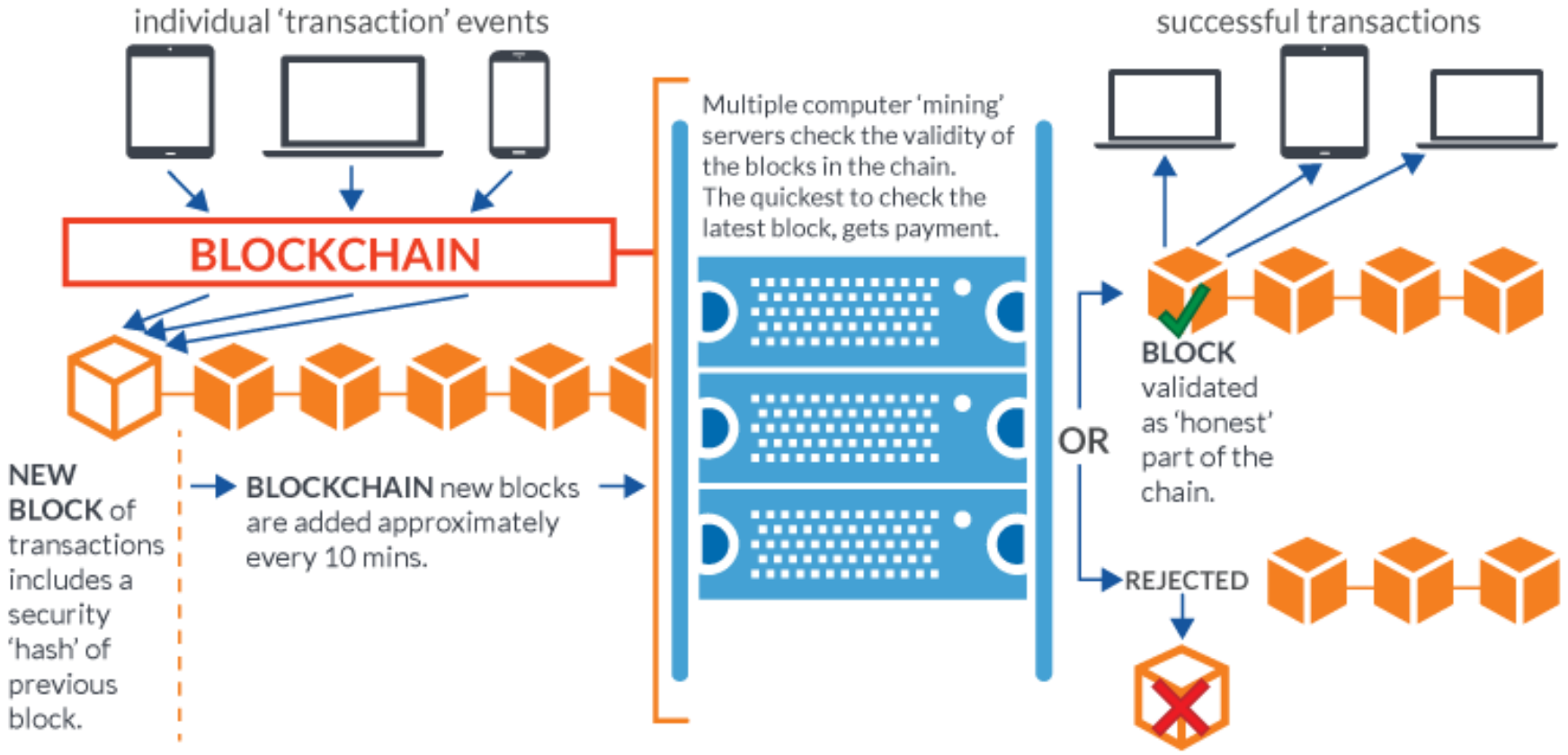
Richard Gendal Brown-Thoughts on the Future of Finance

WHY SHOULD YOU CARE ABOUT BLOCKCHAIN?

"Blockchain technology is fundamentally a record keeping technology, as much as it is a value transfer technology"

InterPARES Trust European Team

HOW IT WORKS



With sufficient thrust, pigs fly just fine

WHY IT BUILDS GOOD RECORDS

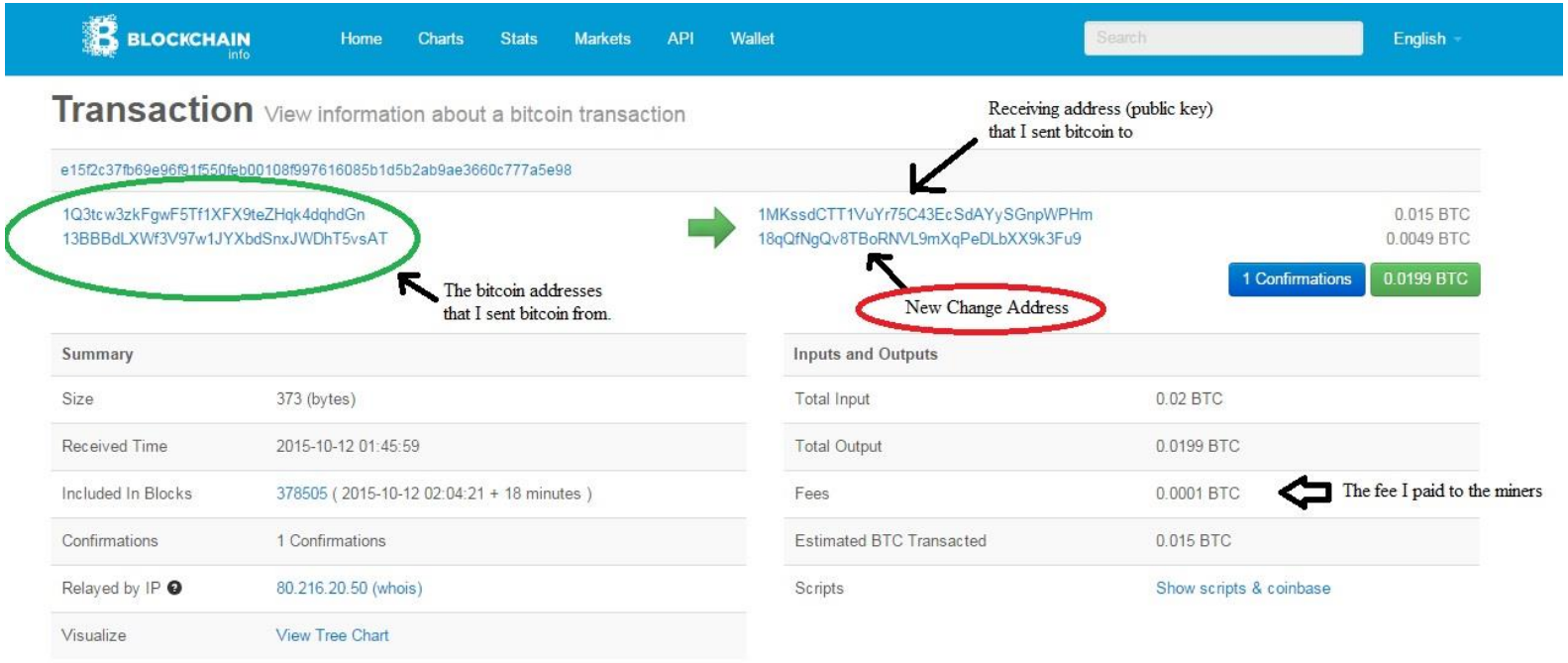
Unlike a traditional clearinghouse, a blockchain implementation does not depend on just one entity to maintain the ledger of transactions. Blockchain depends on many independent third parties—miners—who compete to both verify each transaction and be the first to solve a math problem in exchange for payment. It is each miner's responsibility to maintain an independent, often public memorialization of the transaction on the ledger of the chain ("block") of transactions. The verified chain of transactions is derived when a majority of the thousands of anonymous, independent ledgers match. The use of distributed, anonymous, self-interested arrays of verifiers helps make bitcoin very hard to subvert. It would require collusion between 51 percent of miners, who likely don't know each other, to perpetrate a fraud.

"Why Blockchain Is More Important to Lawyers Than They Probably Understand" by Randolph Kahn

https://businesslawtoday.org/2018/01/why-blockchain-is-more-important-to-lawyers-than-they-probably-understand/

WHY IS IT SECURE?

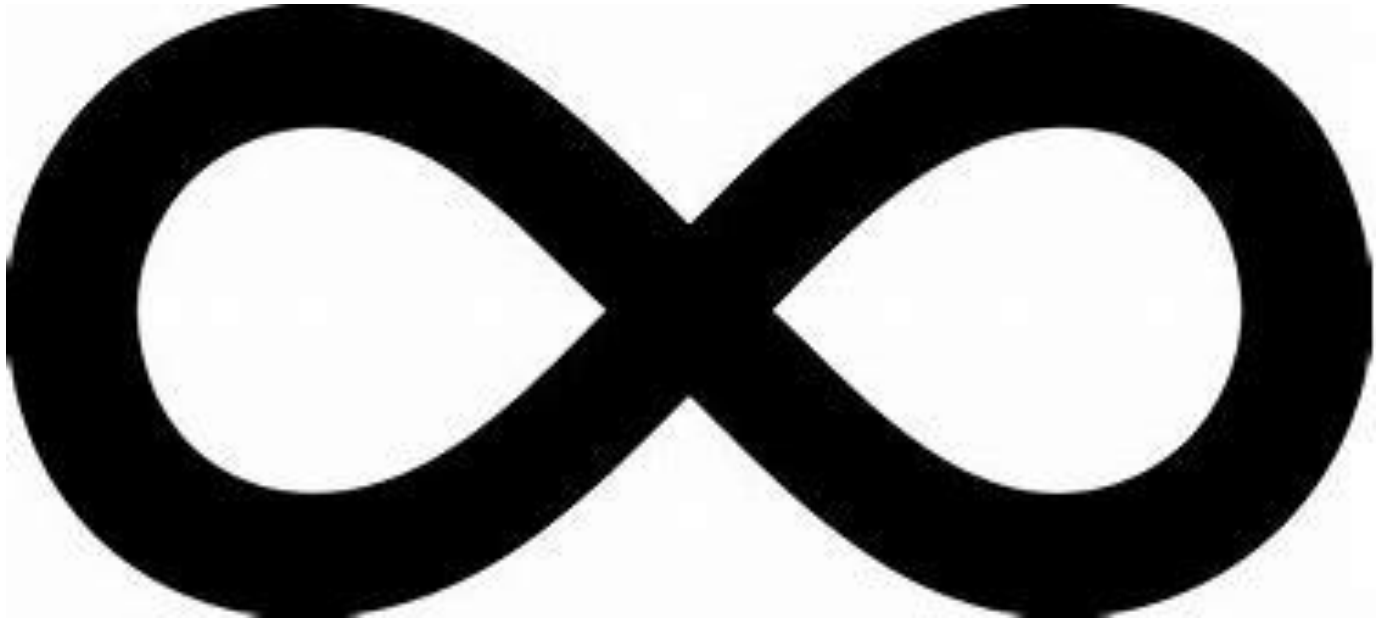
"For starters, blockchain is a technically complex system based on math, algorithms, and encryption. 'The blockchain uses public key cryptography to create an append-only, immutable, timestamped chain of content.'"



DISTRIBUTED LEDGER

What's good and bad with a shared ledger technology?

My psychiatrist told me I was crazy and I said I wanted a second opinion. He said okay, you're ugly too.



THE USE CASES ARE LIMITLESS

GOVERNMENT'S INTEREST IN BLOCKCHAIN

"The Pentagon and U.S. NATO allies have been moving discreetly but aggressively in recent months to develop military-related apps exploiting the capabilities of blockchain. NATO is considering the technology to improve efficiencies across such traditional processes as logistics, procurement and finance…if "significant portions of the [Defense Department] back-office infrastructure can be decentralized," DARPA wrote, "'smart documents and contracts' can be instantly and securely sent and received, thereby reducing exposure to hackers and reducing needless delays in DoD back-office correspondence." (Washington Times, 2017)

THE SECURE MEDICAL RECORD OVER THE

Health Insurance Portability and Accountability Act (HIPAA) Security Rule's major goal "is to protect the privacy of individuals' health information while allowing covered entities to adopt innovative technologies to improve the quality and efficiency of patient care."

"Blockchain offers a fourth model, which has the potential to enable secure lifelong medical records sharing across providers" Harvard Business Review, "The Potential to Transform Electronic Health Records"

USES: COST SAVINGS

"TUI [largest travel agency] had invested less than €1 million ($1.29 million) on blockchain development. That's a small spend, particularly when the group sees potential cost savings around €100 million ($129 million) per year." (Crypto Coin News, 2017).

"There are people who are saying, 'We have these problems. ... We've got to take costs out.' And we kind of shape out and scope out the problem statement. And then you look at what the solutions may be. And then you have some that say, 'You know what? This may lend itself to a blockchain solution because it'll cut out these 10 post-transaction reconciliation steps and therefore you can save this much money.'" (Search CIO, 2017).

SMART CONTRACTS

Smart contracts are self-executing contracts with the terms of the agreement between buyer and seller being directly written into lines of code. The code and the agreements contained therein exist across a distributed, decentralized blockchain network. (Investopedia).

DATA IS UNDER ATTACK-- BLOCKCHAIN IS THE SOLUTION

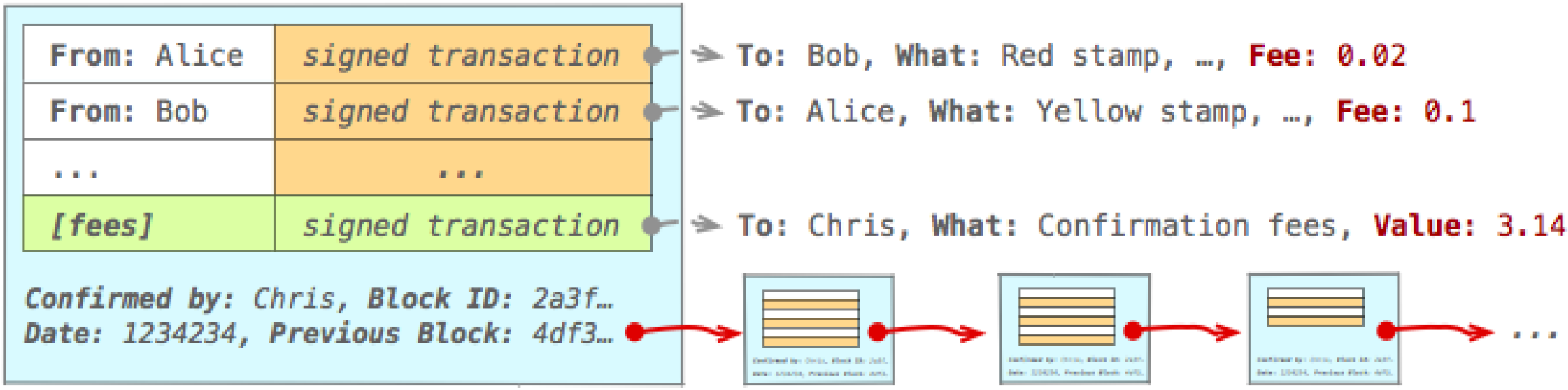
"It's not just [government entities] getting caught deleting or altering important data. Companies are doing it too. Volkswagen cheated on emissions tests. Uber showed fake information about available drivers to government employees. And Airbnb was caught purging more than 1,000 listings, which were in violation of New York state law, just before it shared its data with the public as part of a pledge *to build an open and transparent community*." (Harvard Business Review, 2017).

THINGS BLOCKCHAIN CAN HELP WITH

- Litigation discovery
- Disaster recovery backup
- Life-long medical records
- Proof of ownership

- What else?

FUTURE: PUBLIC RECORD



Ilya Grigorik

Q&A

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