Educating Law Professors about Blockchain

July 24, 2019

Welcome & Introductions

April Dawson

Professor, North Carolina Central University School of Law

Chair, Webinar Committee, AALS Section on Technology, Law & Legal Education

Logistics

- Format
- How to ask questions
- Webinar will be recorded and available for on-demand viewing

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#EvansontheBlock

Legal Edu in a Web 3.0 World

Blockchain: Web 3.0 - The Internet of Value

> "The blockchain is an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually **everything of value**."
>
> - Don & Alex Tapscott
> *Blockchain Revolution*

Blockchain Statistics

- Global blockchain in retail market size, valued at 44.2 million USD in 2017 is projected to reach 2.3 billion by 2023
  - [World Economic Forum]
- Blockchain technology's business value-add will grow to $176 billion by 2025
  - [Deloitte *Insights*]
- 10% of global GDP will be stored using blockchain by 2027
  - [World Economic Forum]

Why it *should* matter to us

We are preparing the next wave of lawyers for

"New collar jobs"

Source: Don Tapscott & Alex Kaplan

#LegalEdu under scrutiny, in flux

- questions of the effectiveness and value of legal education
- rising tuition & six-figure debt
- long on theory, short on practice
- economic downturn, fewer jobs
- paper-based, siloed credentialing
- 20th century ideas in a 21st century world …

- Source: *What's going on in legal education?*, Robert J. Derocher (ABA Journal, June 15, 2017)

Blockchain technology may offer some solutions

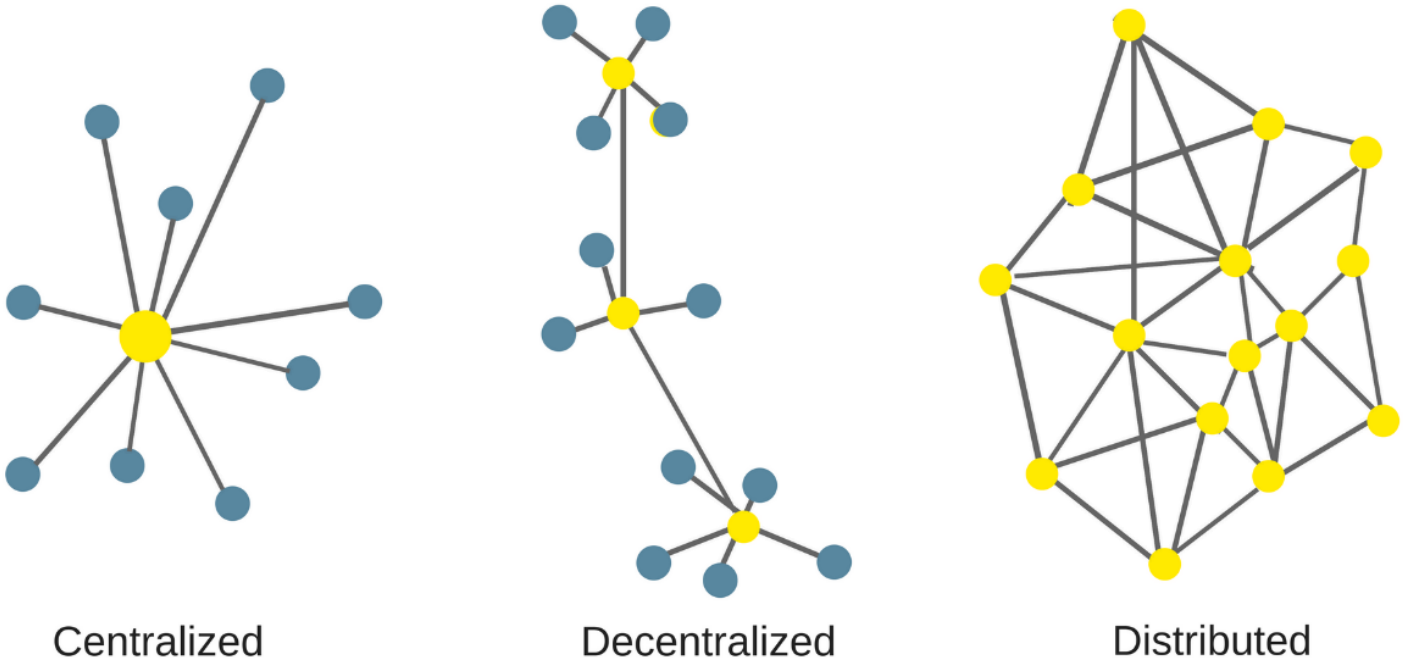
- Self-sovereign **identity** is becoming a possibility
- May allow students to claim rights to their learning **data**
- Better protection of student **privacy** and **cybersecurity**
- **Microcredentialing** of skills and know-how
- More **flexible** delivery, change of pedagogy with newer models of collaborative teaching and learning
- New **funding** models
- The **meta-university** is in the making

Source: Tapscott & Kaplan

Blockchains Defined

Blockchains are **decentralized databases**, maintained by a **distributed network** of computers that rely on **network effects** and **economic incentives** to secure the network.

Three Stages of Computer Network Revolution



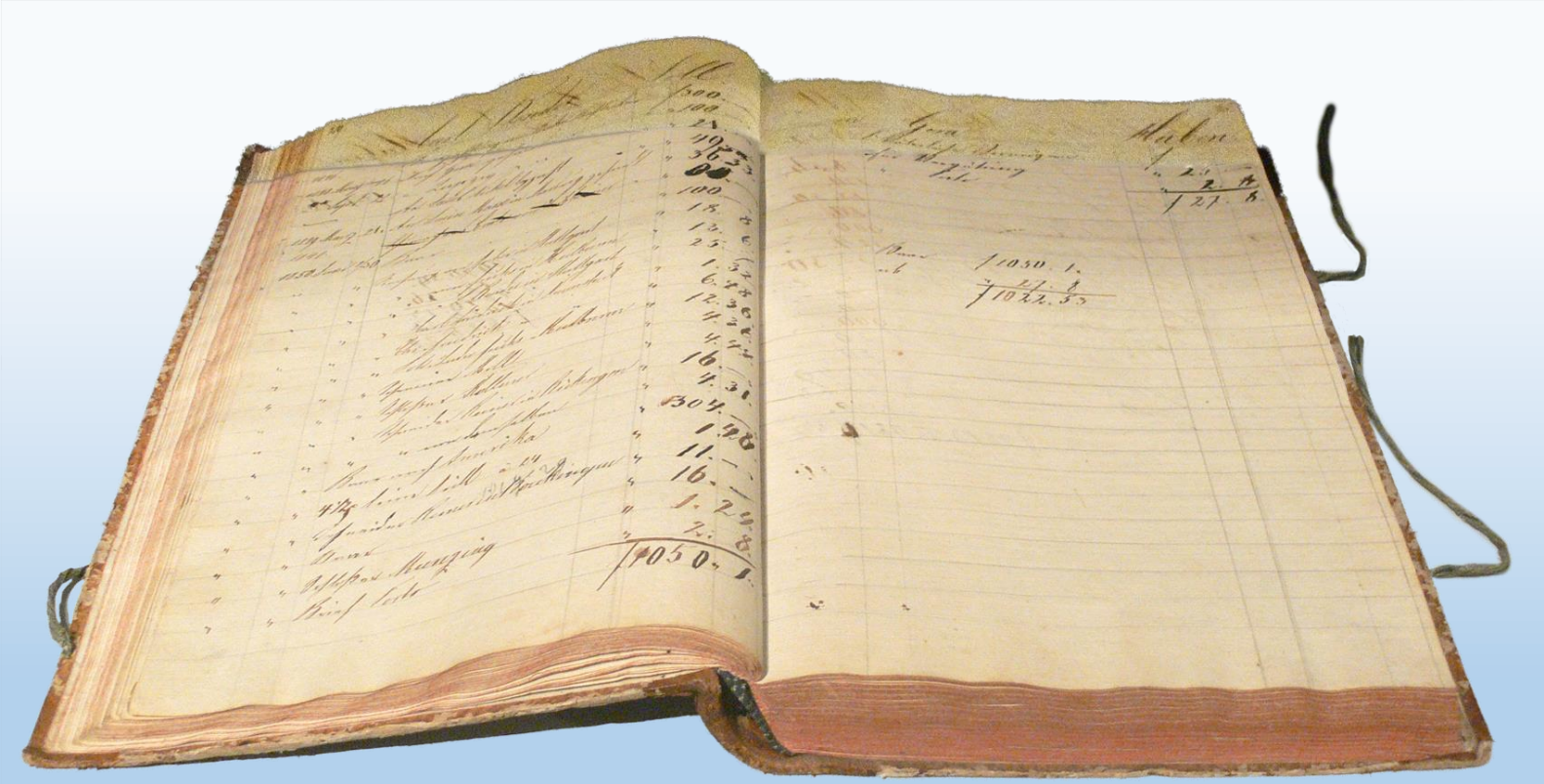
Source: Daxx.com

Blockchain's Origin

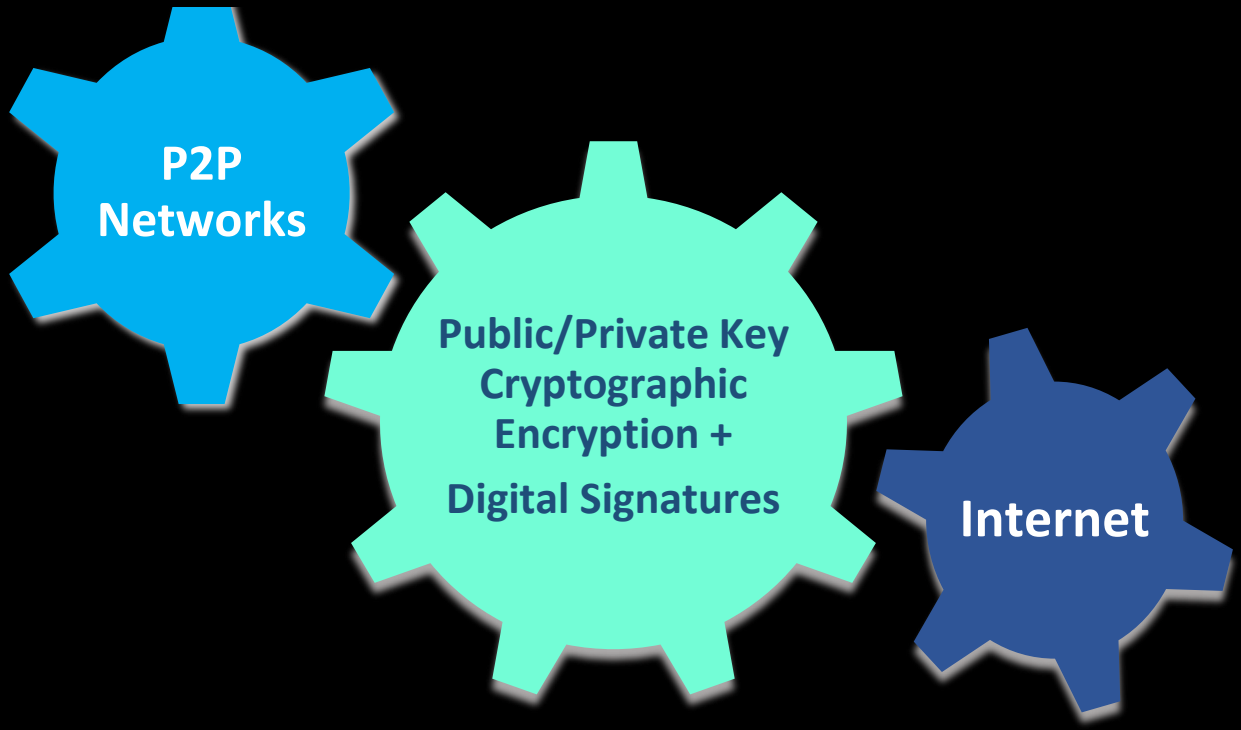
"Satoshi Nakamoto" created the Bitcoin blockchain, launched in 2009, to solve the double-spend problem for digital currency.

[Satoshi White Paper (2008)]

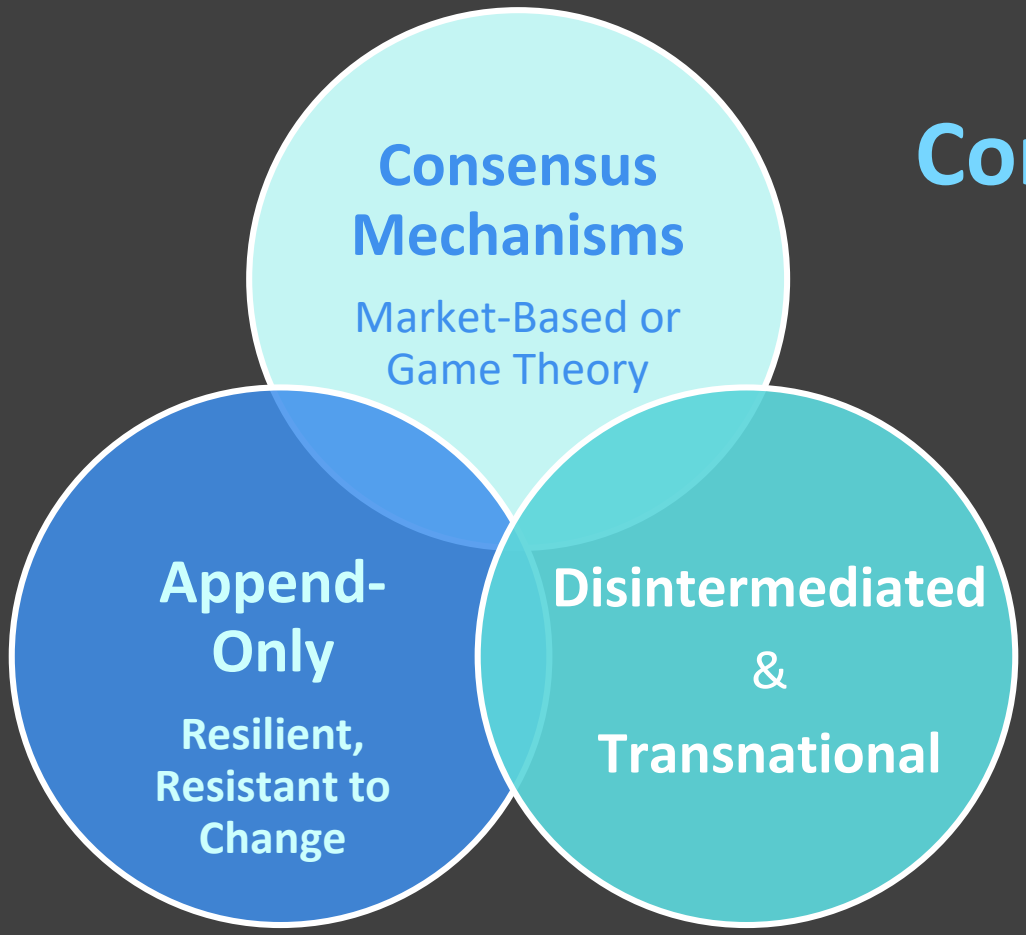
Different from current financial system



Core Technological Components



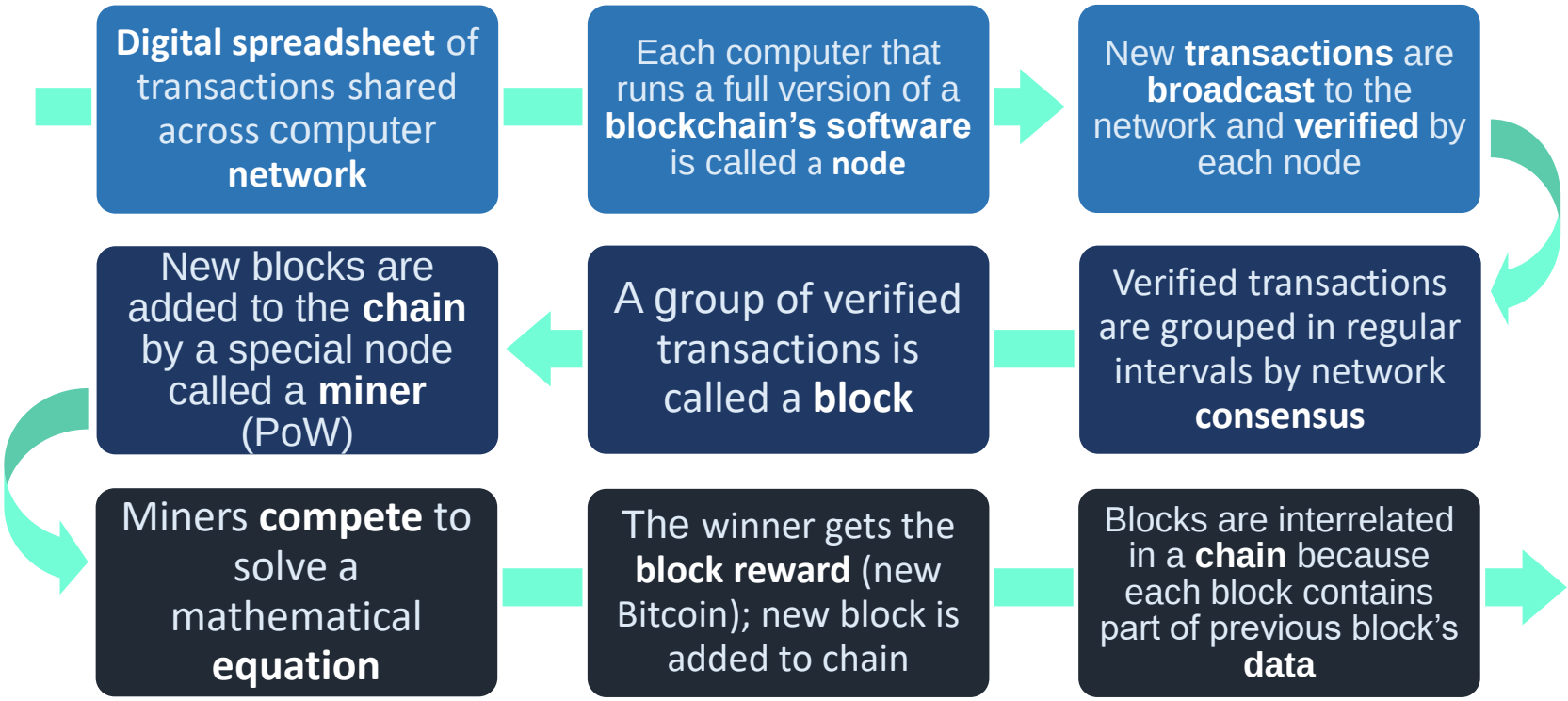
Core Characteristics



Blockchain Mechanics 101

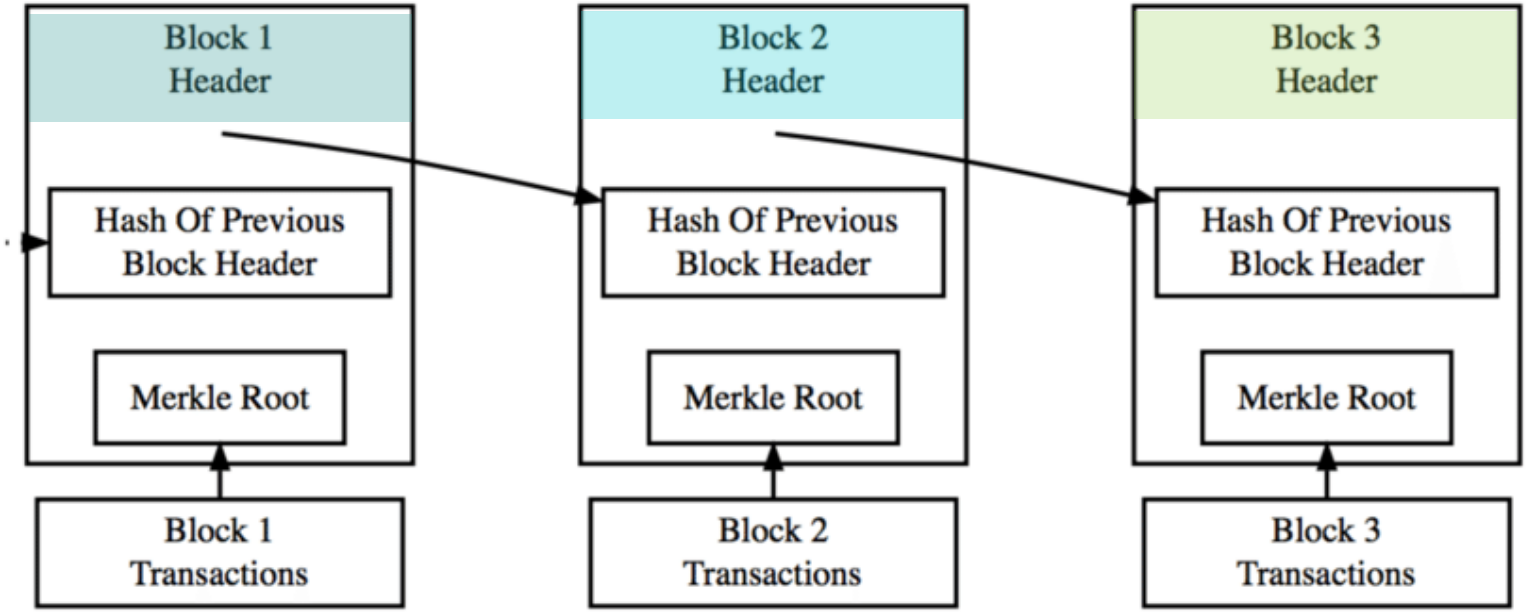
- A **digital spreadsheet** of transactions shared across a **network** of computers
- Each computer that runs a full version of a blockchain's software is called a **node**
- New transactions are **broadcast** to the network and **verified** by each node
- Verified transactions are grouped in regular intervals by network **consensus**
  - Various methods (PoW, PoS etc.)
- A group of verified transactions is called a **block**
- New blocks are added to the **chain** by a special node called a **miner** (PoW)
- Miners compete to solve a mathematical equation
- The winner gets the **block reward** (new bitcoin); new block is added to chain
- Blocks are interrelated because each block contains part of previous block's data

Blockchain Mechanics Visual



Blockchain

an interrelated chain of blocks



Cryptocurrency

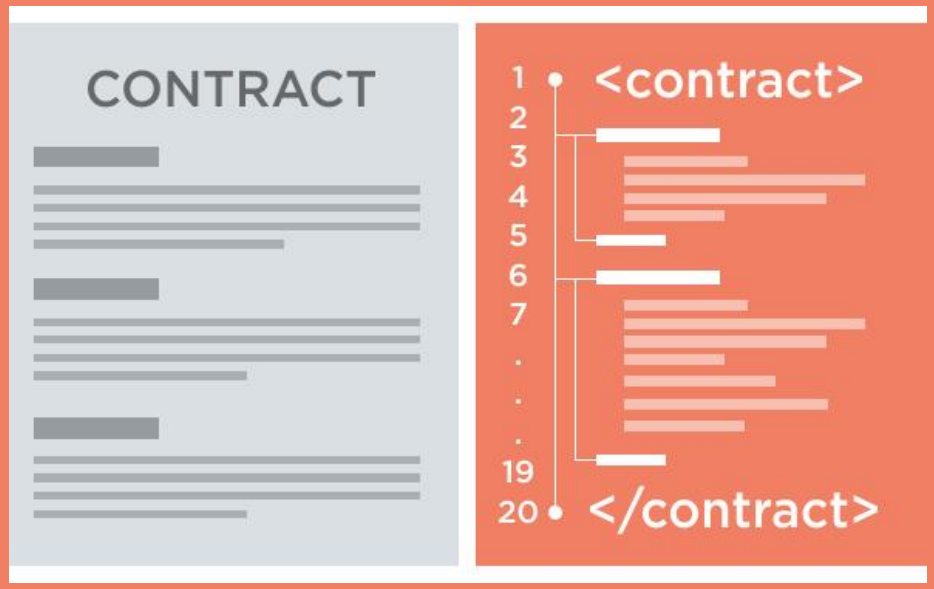
- The first purely digital P2P asset that is generally also scarce
- Prior digital assets were exchangeable digital copies but never exhausted
- Can be transferred directly P2P or acquired via an exchange
- Fungible

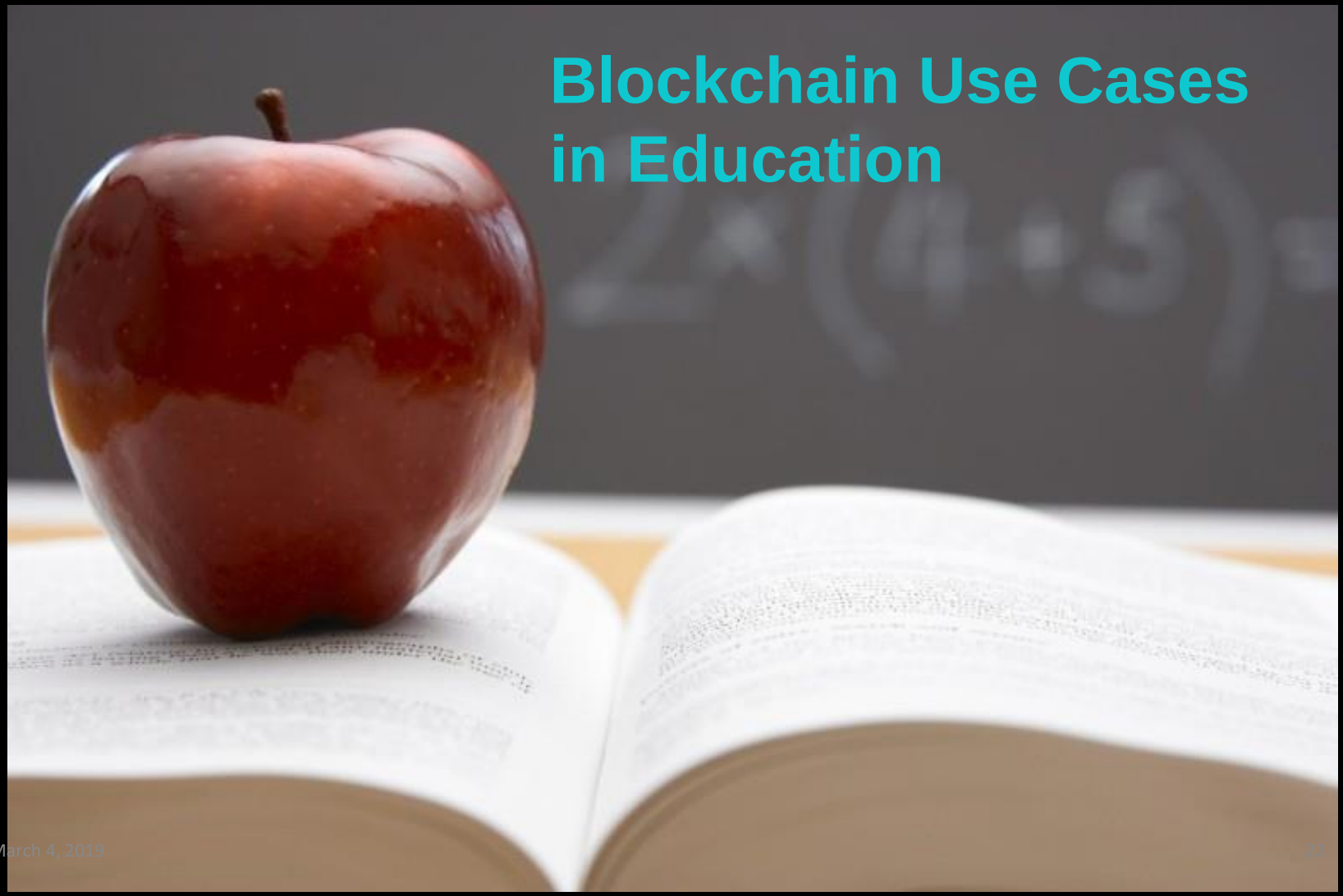
First Use Case: Cryptocurrency [BTC]

> "There's 140 countries [and] every one of them has a currency. Probably two-thirds are not worth the polymer or paper they're written on … cryptocurrency may solve some of the problems."
>
> *– J. Christopher Giancarlo, CFTC Chairman*

Smart Contracts

- Bits of computer code
- Facilitate performance of agreements
  - Ex: vending machine
  - Ex: publishing agreement
- Run on programmable blockchains
- Not all contractual terms can be coded
- Pre-input data integrity is a concern




Blockchain Use Cases
in Education

Use Cases: Revisited

Questions & Answers

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Upcoming Webinars

- Cybersecurity in Biotech (*July 31*)
- Real-Time (inside the classroom) Formative Assessment using CALI Lessons (*August 7*)

For full list: www.aals.org/sections/list/technology-law-and-legal-education/

Wrap Up

Survey – Your Feedback is Important!

Please consider joining the Section on Technology, Law and Legal Education

Thank you for your attendance!