

# Blockchain and Cryptocurrencies: Legal Implications

District Court of Puerto Rico  
October 28, 2022

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Innovating law, policy and ethics for science & technology

## Outline

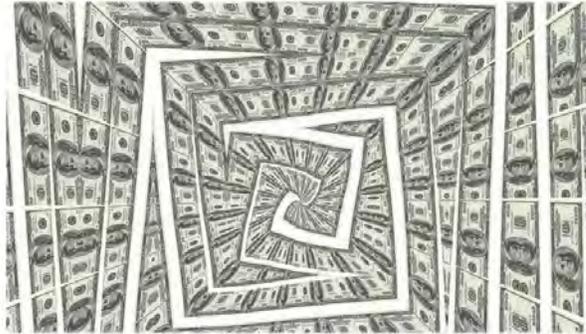
- I. What are Blockchains and Cryptocurrencies?
- II. Legal and Regulatory Status of Blockchains and Cryptocurrencies
- III. Blockchains and Cryptocurrencies in the Courts and the Practice of Law

## Part I: What are Blockchains and Cryptocurrencies?

“The blockchain will be to banking, law and accountancy as the internet was to media, commerce, and advertising. It will lower costs, disintermediate many layers of business and reduce friction.”

- Joichi Ito, (former) Director,  
MIT Media lab

MENU ABOUT US IN KING & WOOD MALLESONS NOT OUT OF THE WOODS YET? 5 mins ago



## Blockchain Technology Will Transform the Practice of Law

June 25, 2015

AUTHORS



**Editor's Note:** The authors of this post are attorneys at Holland & Knight.

By Joe Dewey, Partner, and Shawn Amual, Associate, Holland & Knight

There is no shortage of articles written about the application of blockchain technology to the law. The majority of these articles, however, have focused on either regulatory concerns



"I'll give you a HUGE bonus in bitcoins if you can explain to me what the hell they are."

## Blockchain Basics

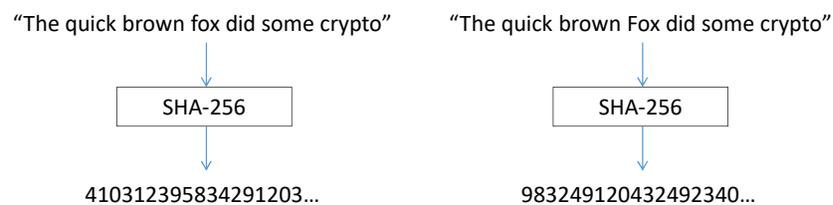
- Blockchain is specific type of shared digital ledger (or database)
- While a traditional ledger has a central record keeper, a blockchain is stored in multiple identical copies by each participant in a network (each called a “node”)
- A group of transactions on the network are stored as a “block” that is individually validated as legitimate
- The blocks are securely linked to one another to form a “chain” of records
- Blockchain provides an immutable time-stamp for each block added to the network

## Transparency with Pseudonymity

- Each transaction and its associated value is visible to everyone with access to the system
- Each user on a blockchain has a unique 30-plus-character alphanumeric address that identifies it (public key)
- Users can remain anonymous – transactions occur between blockchain addresses
- Users access their encrypted info with a private key

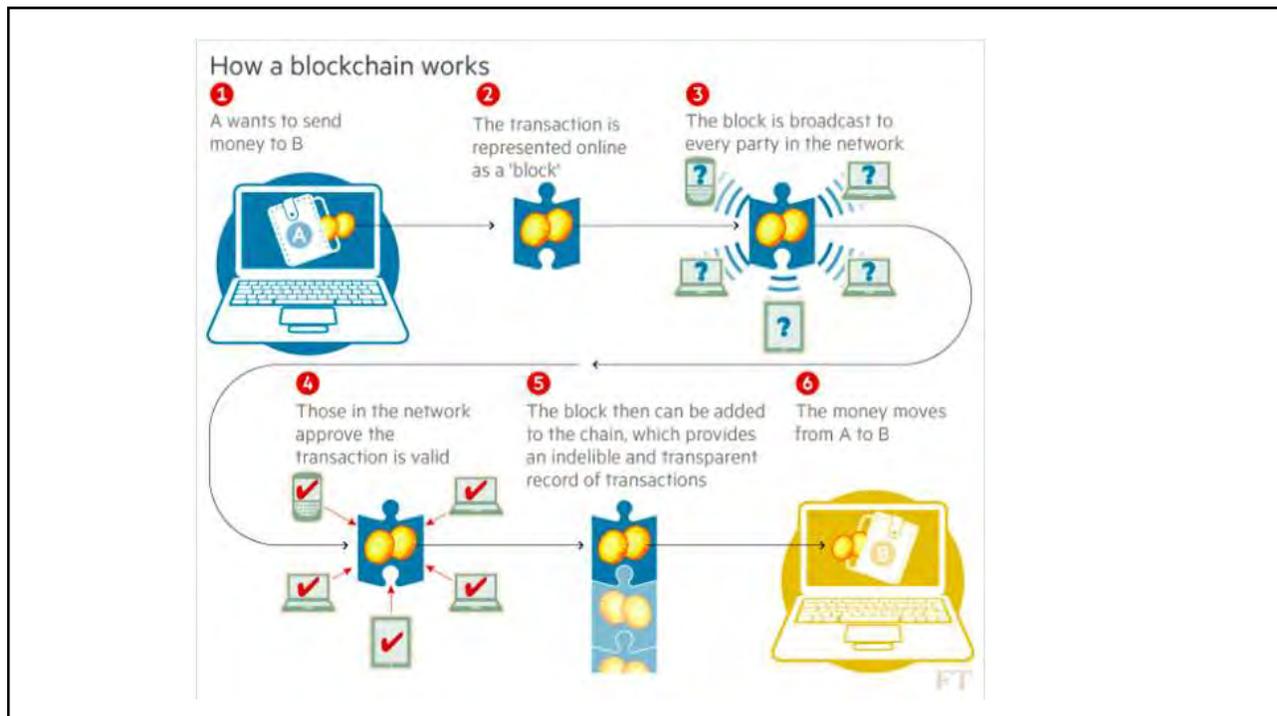
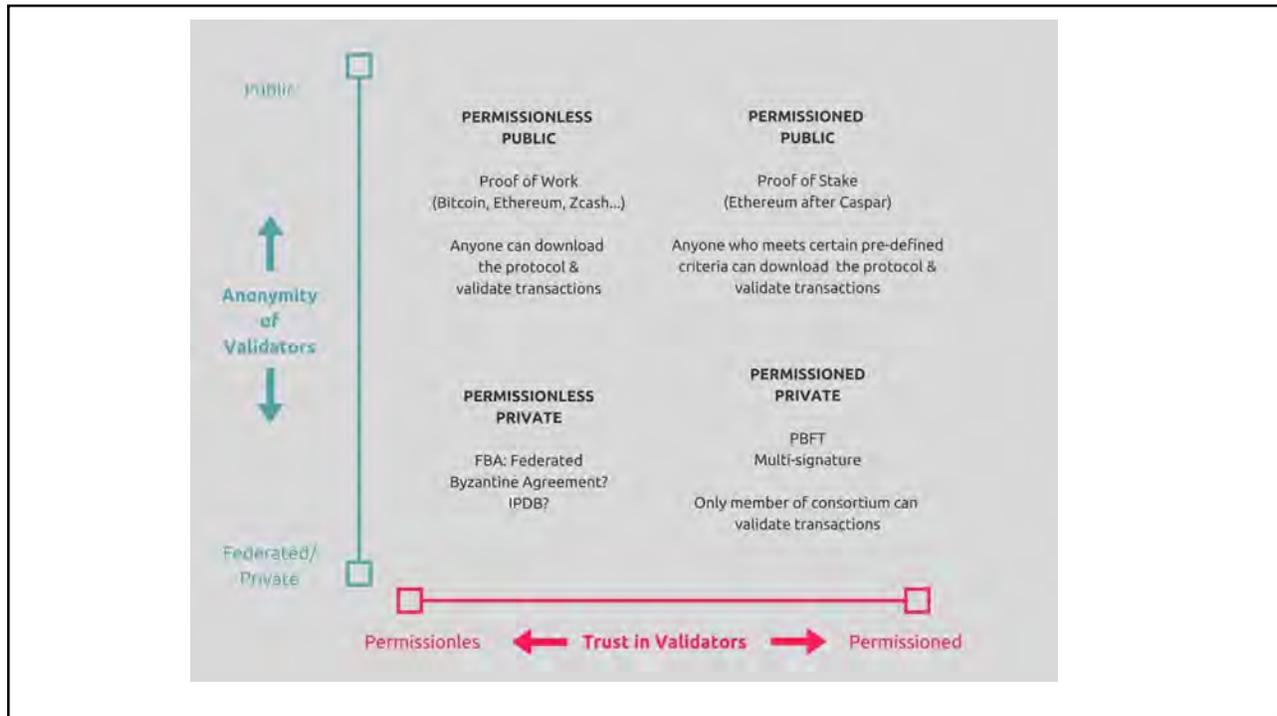
## Key Component #1: Cryptographic “Hashes”

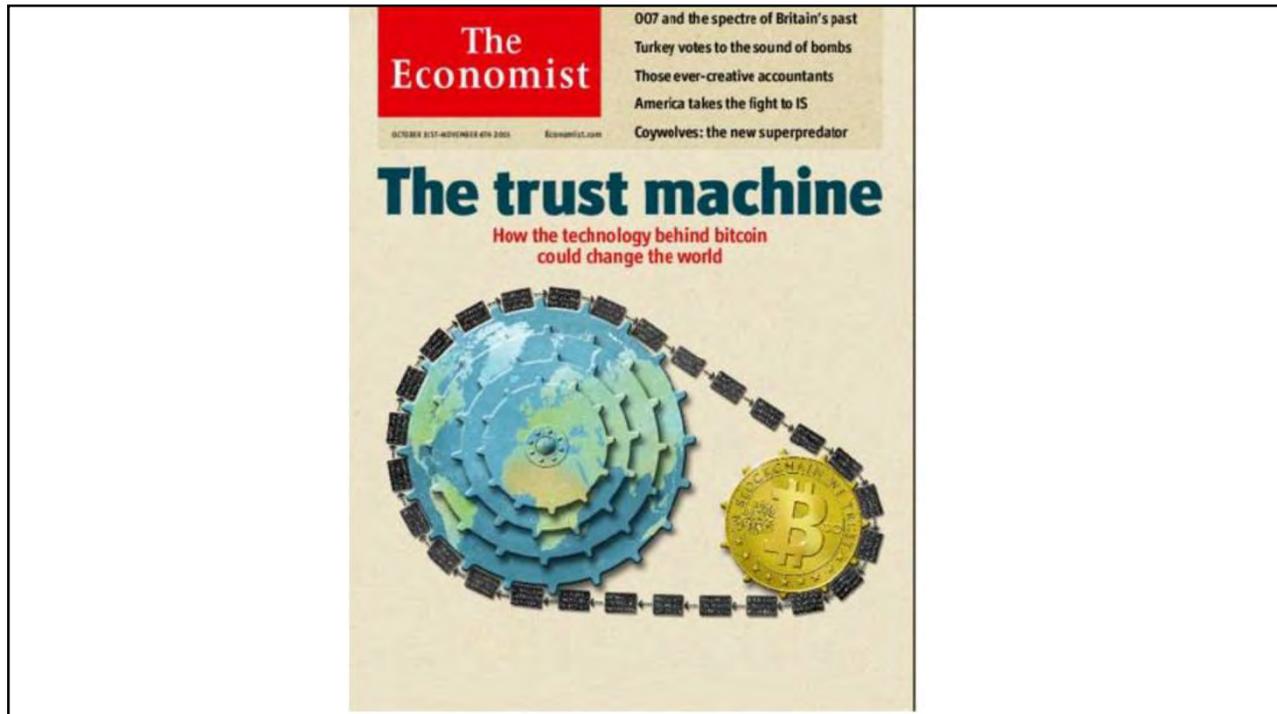
- A hash function is a software tool that takes a block of data and produces a randomly generated fixed size integer
- Any change to the input randomizes it



## Key Component #2: Consensus Mechanism

- Blockchains work by “consensus” to ensure all copies of the blockchain are verifiably synchronized
- How is consensus achieved?
  - Proof of work (mining)
  - Proof of stake
  - Randomized delegated proof of value (Roundtable)
  - Proof of authority





## Advantages of Blockchain

- Transparency
- Cryptographic security
- Decentralization - create digital trust between strangers
- Tamper proof immutable records
- Historical record of all changes in database
- No single point of failure
- Lower transaction costs
- Speed transaction times
- Reduce errors and redundancies

## Limitations of Blockchain

- Still a nascent industry – many business use cases have not been established yet
- Scalability –especially for public blockchains
- Lack of interoperability of blockchains
- Not suited for storing large amount of data
- Immutability can sometimes be a liability (e.g., GDPR right to forget; document retention programs)
- Jurisdiction over actors on blockchain indeterminate
- No one has responsibility (e.g., DAO)



Enrique Dans

Mar 6 · 3 min read · Listen



**It doesn't matter if you don't understand blockchain and Decentralized Digital Identity: it just works**

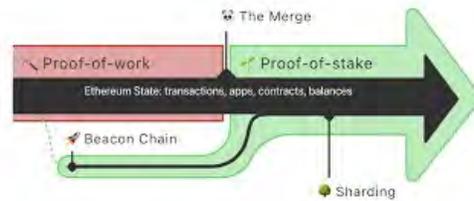


IMAGE: PublicDomainPictures — Pixabay (CC0)



# Ethereum

- Second largest cryptocoin
- Allows other software to run on the Ethereum blockchain
  - Smart contracts
  - NFTs
- Founder: Vitalik Buterin



## PROOF OF WORK



The probability of mining a block is determined by how much computational work is done by the miner.



A reward is given to the first miner to solve the cryptographic puzzle of each block.



Network miners compete with one another using computational power. Mining communities tend to become more centralized over time.

## PROOF OF STAKE



The probability of validating a new block is determined by how large of a stake a person holds (how many coins they possess).



The validators do not receive a block reward, instead they collect network fees as their reward.



Proof of Stake systems can be much more cost and energy efficient than Proof of Work systems, but are less proven.

3IQ Research Group

## Privacy Coins



## XRP/Ripple



- XRP is a digital coin issued by the company Ripple
- XRP operates on a distributed ledger, not a blockchain
- Allows for very fast clearance (~4 seconds) using a set of about 40 validators
- Intended to be a competitor of Swift for rapid international transactions



## A cryptocurrency created as a joke about a dog meme now has a market cap above \$2 billion **8 billion!**

[businessinsider.com/dogecoin-cryptocurrency-has-market-cap-above-2-billion-2018-1](https://www.businessinsider.com/dogecoin-cryptocurrency-has-market-cap-above-2-billion-2018-1)



## You'll soon be able to sell your genetic info for a new cryptocurrency called Luna Coin

[cnbc.com/2017/12/18/luna-coin-project-sell-your-genetic-data-for-crypto-tokens.html](https://www.cnbc.com/2017/12/18/luna-coin-project-sell-your-genetic-data-for-crypto-tokens.html)

Christina Farr | Ari Levy

December 18,



Luna DNA

## Sweatcoin Is a Digital Currency You Earn For Working Out

[lifehacker.com/sweatcoin-is-a-digital-currency-you-earn-for-working-ou-1821859303](https://lifehacker.com/sweatcoin-is-a-digital-currency-you-earn-for-working-ou-1821859303)



## Kodak Last-Gasp Hope: KodakCoin

[nytimes.com/2018/01/09/business/dealbook/kodak-bitcoin.html](https://www.nytimes.com/2018/01/09/business/dealbook/kodak-bitcoin.html)

TOM BUERKLE

January 9, 2018



The New York Times

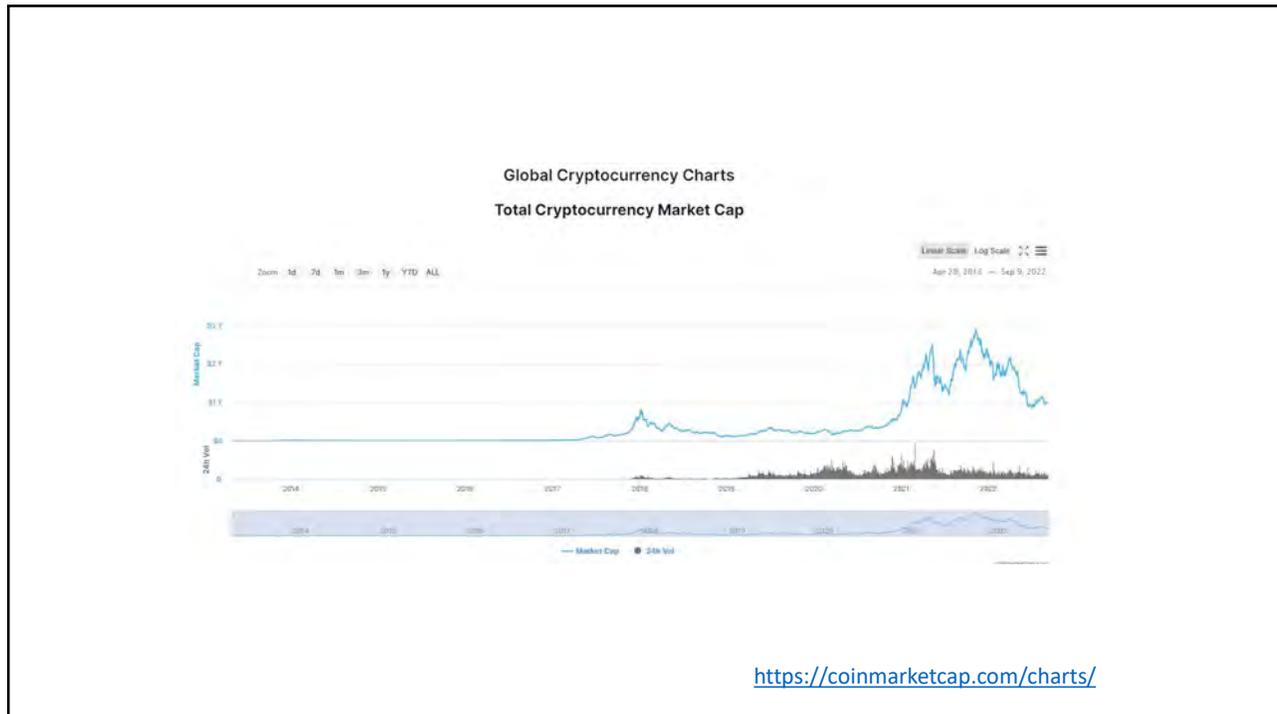
Everyone Is Getting Hilariously Rich and You're Not

By NELLIE POWLES JAN. 13, 2018



FRANCIS FORTNER wears an Ethereum sweater along with Matthew Bantz wearing a Bitcoin sweater at the San Francisco Bitcoin Meetup Holiday Party at the Runway Incubator in December.

Jason Henry for The New York Times



## HOW MANY BUSINESSES ACCEPT BITCOIN? [2022]: 21 IMPORTANT BITCOIN STATISTICS

By Jack Flynn | Jun. 24, 2022

**Research Summary:** Despite Bitcoin's notorious volatility, its importance in the modern market is ever-growing. That's why it's important to know how the currency is impacting the business world. After all, today's digital landscape is constantly changing, and businesses will have to adjust to Bitcoin's popularity. According to our extensive research:

- Approximately **15,174 businesses worldwide accept Bitcoin**, with around **2,300 of those businesses operating in the US**.
- There are **36,659 Bitcoin ATMs** available in the U.S., as of April 2022.
- As of 2020, **28% of American small businesses** accept cryptocurrency as payment.
- As of May 2022, there were roughly **260,000 Bitcoin transactions per day** in the U.S.
- Each day there's **over \$1 million spent on goods and services** with Bitcoin in the U.S.
- Up to **40% customers** who pay with Bitcoin are new customers who spend twice as much money as credit card users.



## Where to Store Cybercurrencies?

- Online wallet
- Mobile wallet
- Desktop wallet
- Hardware wallet
- Paper wallet



## Cryptocurrency Problem: Volatility

### Bitcoin Headed For \$100,000 Or \$100? CEOs, Big Investors And Harvard Economist Predictions



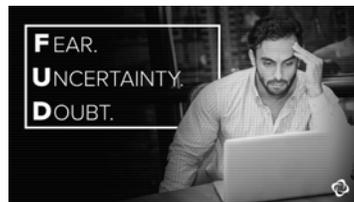
This article does not contain investment advice or recommendations. Every investment and trading move involves risk, you should conduct your own research when making a decision.

### Bitcoin plunges 30%: How the headlines could affect your money

Plan: There's a new way for 13- to 17-year-olds to invest in stocks, ETFs, and mutual funds.  
Published May 19, 2021, 4:14:17 PM EDT



Bitcoin Crash: Analyzing the May 19th  
Mayhem



MARKETS

## Most cryptocurrencies will crash to zero, Goldman Sachs says

PUBLISHED WED, FEB 7 2018-7:35 AM EST | UPDATED WED, FEB 7 2018-1:22 PM EST



Arjun Kharpal

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### KEY POINTS

- Most cryptocurrencies are likely to fail with their value falling to zero, Goldman Sachs said in a note.
- The investment bank compared the current market to the "internet bubble of the late 1990s."
- Steve Strongin, head of Goldman Sachs global investment research, said that most cryptocurrencies are unlikely to see their recent peaks again.



## Cryptocurrency Problem: Scalability



**47,000** transactions per second



**115** transactions per second



**3-7** transactions per second

# Cryptocurrency Problem: Energy Use

Corrected: Publisher Correction

## Bitcoin emissions alone could push global warming above 2°C

Bitcoin is a power-hungry cryptocurrency that is increasingly used as an investment and payment system. Here we show that projected Bitcoin usage, should it follow the rate of adoption of other broadly adopted technologies, could alone produce enough CO<sub>2</sub> emissions to push warming above 2 °C within less than three decades.

Camilo Mora, Randi L. Rollins, Katie Taladay, Michael B. Kantar, Mason K. Chock, Mio Shimada and Erik C. Franklin

NATURE CLIMATE CHANGE | VOL 8 | NOVEMBER 2018 | 924–936 |

# Cryptocurrency Problem: Security

Once hailed as unhackable, blockchains are now getting hacked

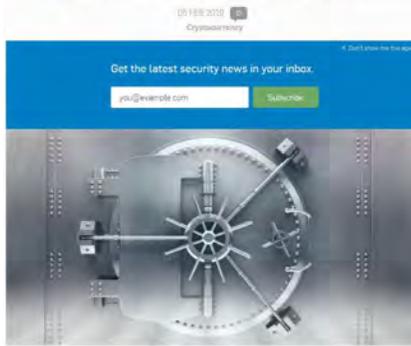
[technologyreview.com/s/612974/once-hailed-as-unhackable-blockchains-are-now-getting-hacked](https://technologyreview.com/s/612974/once-hailed-as-unhackable-blockchains-are-now-getting-hacked)



Other cryptocurrencies that have had 51% attacks: Botcoin SV, Bitcoin Cash, Verge

# Cryptocurrency Problem: Lost Assets

Crypto exchange in limbo after founder dies with password



MAN ACCIDENTALLY THREW BITCOIN WORTH \$108 MILLION IN THE TRASH, SAYS THERE'S 'NO POINT CRYING ABOUT IT'

BY ANTHONY CUTHBERTSON ON 11/30/17 AT 12:25 PM



Spent treasure: A hauler drive containing hundreds of millions of dollars of bitcoin is buried in a landfill site in Newport, Wales, under four years of trash. ANWAR AMRO/AF/GETTY IMAGES

# Cryptocurrency Problem: Black Markets/Scams

Ex-CEO of Crypto Company Sentenced to Prison for Fraud, Fined \$9 Million

State Senator Reports to Jail Pending Verdict in Cryptocurrency Fraud Case



Arizona Bitcoin Trader Fined and Sent to Jail for Cryptocurrency Fraud

Blockchain CEO faces 120 years in prison for cryptocurrency scam

AriseBank's CEO could spend a lifetime in prison

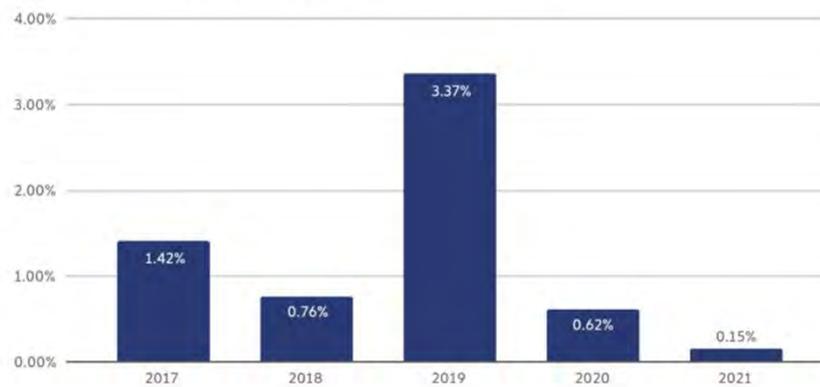
Total cryptocurrency value received by illicit addresses | 2017–2021



Note: "Cybercriminal administrator" refers to addresses that have been attributed to individuals connected to a cybercriminal organization, such as a darknet market.

Chainalysis, The 2020 Crypto Crime Report (Feb. 2022)

Illicit share of all cryptocurrency transaction volume | 2017–2021



Chainalysis, The 2020 Crypto Crime Report (Feb. 2022)

## Terrorist Funding / Money Laundering

- ISIS saw the benefits of cryptocurrencies as early as 2014, when it first declared its purported caliphate in Iraq and Syria.
- In 2015, a Virginia man pleaded guilty to conspiring to provide material support to the Islamic State for attempting to teach others how to use Bitcoin to anonymously fund the terrorist group.
- Although most of the group's financing still comes through conventional means, there is evidence that the Islamic State and other organizations have used cryptocurrencies to acquire weapons and pay affiliated fighters for carrying out attacks.
- In 2020, DOJ seized the cyberaccounts of Hamas's military wing, al-Qaeda, and ISIS.



<https://www.justice.gov/opa/pr/global-disruption-three-terror-finance-cyber-enabled-campaigns>

### Further Reading:

Goldman et al., *Terrorist Use of Virtual Currencies: Containing the Threat* (CNAS 2017)

<https://www.lawandsecurity.org/wp-content/uploads/2017/05/CLSCNASReport-TerroristFinancing-Final.pdf>

## Organized Crime

- Criminal groups, including transnational drug cartels and money launderers, are also keen to leverage cryptocurrencies.
- While these organizations once relied on creative methods to smuggle large amounts of physical cash across borders, in cryptocurrencies they have found a frictionless means of virtually transferring ill-gotten gains.
- ICE testimony to Congress re Trafficking of Fentanyl:  
<https://www.dhs.gov/news/2018/01/25/written-testimony-ice-senate-homeland-security-and-governmental-affairs-permanent>

## Sanctioned States

- States including Russia and Venezuela have taken an interest in creating their own cryptocurrencies to circumvent international sanctions.
- In February 2018, Venezuela became the first national government to debut a digital currency, issuing the first \$735 million of a planned \$6 billion worth of “petro” coins. (As of Aug. 2018, it does not appear to function.)
- Russia has not put a state-backed cryptocurrency into use, but a group of Russian banks has started experimenting with Ethereum technology.

## Congressional Testimony of Peter Van Valkenburgh, Coinbase (June 30/2021)

- “For every transaction we want blocked, there’s a transaction that we should celebrate for being unstoppable. Yes, there are criminals making payments on the Bitcoin network because banks won’t bank them. There are also pro-democracy activists and Belarus and anti-police violence protesters in Nigeria, taking donations on the Bitcoin network because local banks won’t bank them.... For every decentralized app that’s trying to scam investors. There’s another that’s testing out ways to disperse universal basic income, will remove the corporate control over social networking, or eliminate the hacking risk inherent in centralized identity solutions.”

1st killer app of the Internet: 1st killer app of Blockchain:

Email



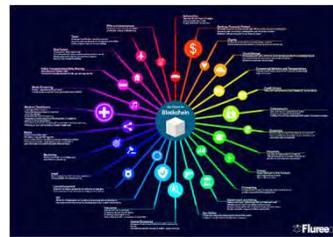
Cryptocurrencies



Today?

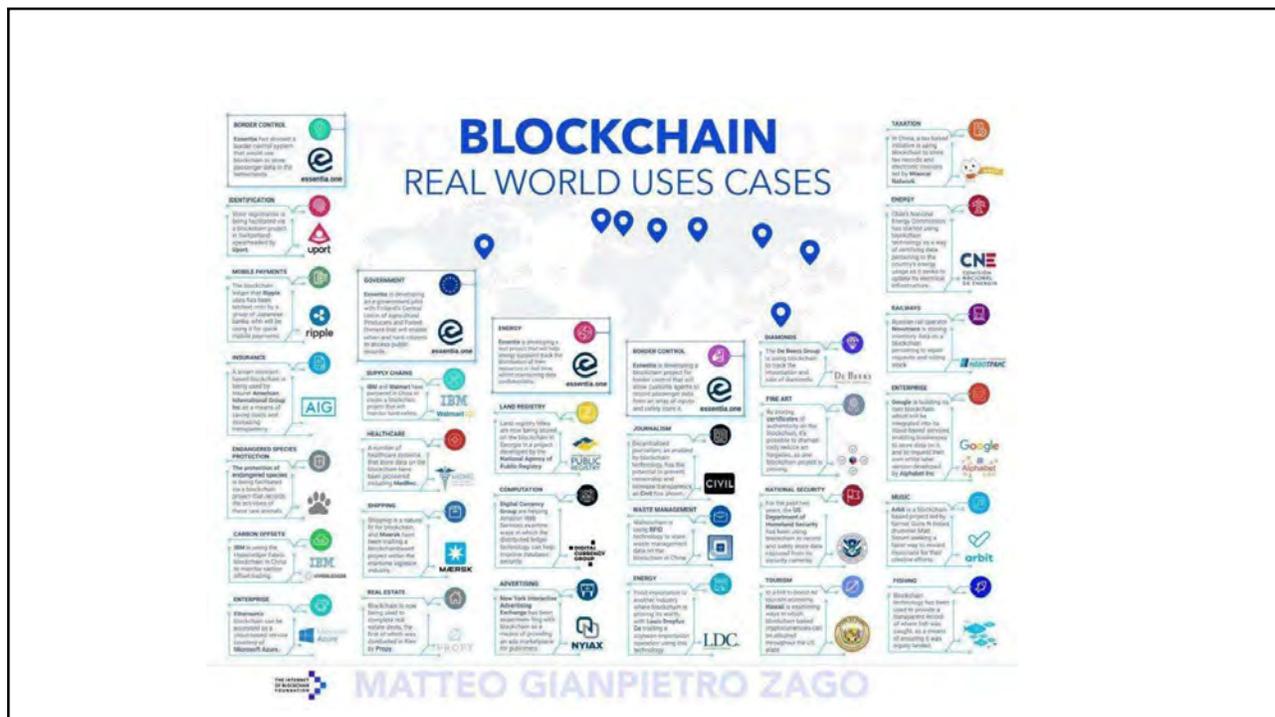


Tomorrow?



## Major Non-Cryptocurrency Applications of Blockchain

- Supply chains
- Shipping
- Smart contracts
- Authentication of antiquities and ethical sourcing
- Financial systems
- Medical records
- Energy trading
- Real estate
- Voting



## Smart Contracts

- Contracts that are self-enforceable when specified conditions occur
  - e.g., when my patent issued by the PTO, my partners each receive a bonus payment
- These triggers would be automated and fall outside of human legal action
  - could even use Google search as a data input to monitor real-world events that automatically trigger disbursements or other actions
- By putting contract on blockchain, all terms are transparent and cannot be altered; enforcement is automatic



## Supply Chains

**IBM**

**Walmart & IBM are envisioning a fully transparent 21<sup>st</sup> century digitized food system**

**In case of a food safety issue, how to do traceability in minutes/ seconds instead of weeks ?**

SOURCE: Frank Yiannas and Walmart are the source for this slide content. © 2017 IBM Corporation

7,689 views | Mar 14, 2018, 01:10am

## How Blockchain Could End The Trade In Blood Diamonds - An Incredible Use Case Everyone Should Read



Bernard Marr Contributor @

The international markets for diamonds and precious stones have taken steps to eradicate conflict diamonds as well as issues such as child labour in recent decades.



IBM, Maersk

## IBM, Maersk launch blockchain-based shipping platform with 94 early adopters

After testing it earlier this year, the companies announced scores of early adopters have agreed to pilot the distributed ledger technology, enabling them to track shipments in near-real time.



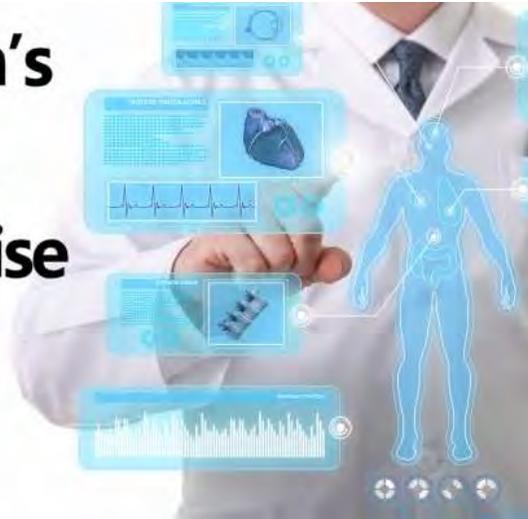
By Lucas Mearian  
Senior Reporter, Computerworld | 17 AUGUST 2019 08:11 PM



After launching a proof of concept earlier this year, IBM and Maersk have [unveiled TradeLens](#), the production version of an electronic ledger for tracking global shipments; the companies say they have 94 participants piloting the system, including more than 20 port and terminal operators.

The jointly developed electronic shipping ledger [records details of cargo shipments](#) as they leave their origin, arrive in ports, are shipped overseas and eventually received.

# Can BitCoin's Blockchain Revolutionise Health Records?



## Healthcare Applications

- Pharmaceutical tracking/preventing counterfeits
- Billing/reimbursement
- Clinical trials
- Physician networks
- Pricing and choice for procedures
- Medical records data storage and sharing
- Biological samples for research



## The benefits of blockchain for the real estate industry

-  Easier property search
-  Improves pre-purchase due diligence
-  Reduces the need for intermediaries
-  Provides smart property contracts
-  Safer property transactions
-  Lowers the entrance to the real estate investing
-  Turns real estate into a liquid asset

**WORLD ECONOMIC FORUM**  
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## The future of financial infrastructure

An ambitious look at how blockchain can reshape financial services



An Industry Project of the Financial Services Community | Prepared in collaboration with Deloitte

Part of the Future of Financial Services Series • August 2016



RYAN SNEEK

BACKCHANNEL 09.16.18 07:00 AM

## MEET THE MAN WITH A RADICAL PLAN FOR BLOCKCHAIN VOTING

A new movement says that crypto-voting can purify democracy—and eventually eliminate the need for governments altogether.

BY ANDREW LEONARD

## New Blockchain Concepts



## 101 Blockchains | AN OVERVIEW OF STABLECOINS

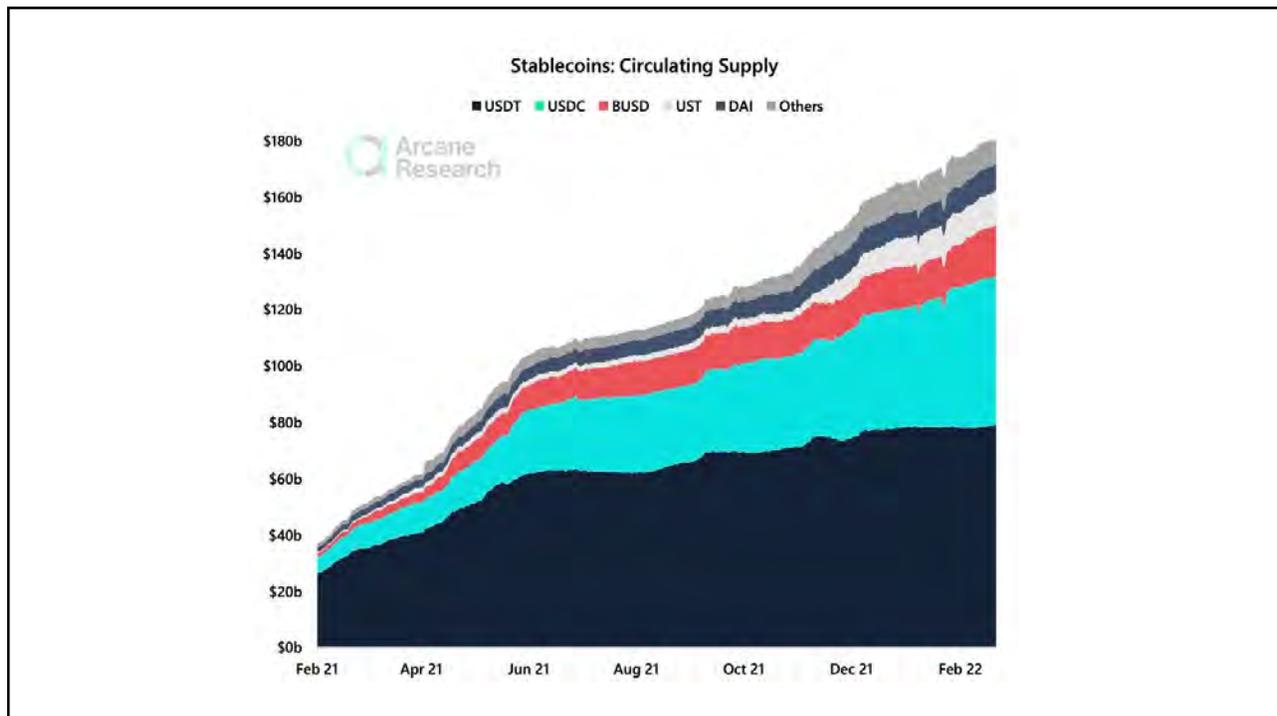
**WHAT IS A STABLECOIN?**

Stablecoin is a type of cryptocurrency that always holds a stable price. These type of cryptocurrencies are created to take on the unstable crypto market scenario and ensure a stable ground for all.

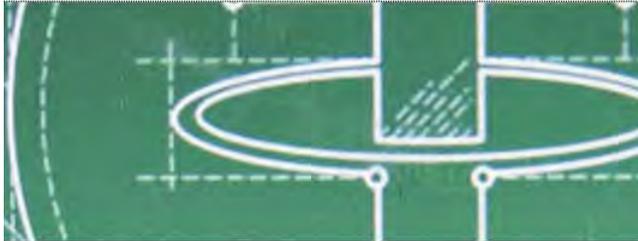
Thus, stablecoins are crucial for crypto investors, exchanges and the overall crypto market.

### DIFFERENT TYPES OF STABLECOINS

Type	What it Means	Popular Projects
<b>Fiat-Backed</b>	These are backed up by fiat money and one of the common forms of stablecoin. In simple term, it's somewhat a digital form of fiat money.	TrueUSD, tether, GEMINI
<b>Commodity-Backed</b>	This type of coin is backed up by commodities such as Gas, Gold, Valuable Metals, etc. Here, all these commodities will always have a stable value on the network.	BIGFOX, [Logo]
<b>Cryptocurrency-Backed</b>	Cryptocurrencies back up this type of stablecoin. Usually, these coins are backed up by a mix of different cryptocurrencies, instead of a single crypto. This structure prevents any volatility risks.	MAKER, SYNTHETIX
<b>Seigniorage-Style/Non-collateralized</b>	This category of coins is a bit different. They don't have any assets to back them up, rather they use an algorithm to burn or add crypto to stabilize the value.	CARBON, KOWALA



**Bloomberg**



Cryptocurrencies

## Stablecoins Face Crackdown as U.S. Discusses Risk Council Review

By [Jesse Hamilton](#) and [Saleha Mohsin](#)  
September 10, 2021, 5:04 PM MST

- ▶ Treasury, other agencies consider launching FSOC examination
- ▶ Tokens' fast growth has triggered anxieties among regulators

U.S. officials are discussing launching a formal review into whether [Tether](#) and other stablecoins threaten financial stability, scrutiny that could lead to dramatically ramped-up oversight for a fast-growing corner of the crypto market.

After weeks of deliberations, the [Treasury Department](#) and other federal agencies are nearing a decision on whether to launch an examination by the [Financial Stability Oversight Council](#), said three people familiar with the matter who asked not to be named in commenting on closed-door discussions. [FSOC](#) has the power to deem companies or activities a systemic threat to the financial system – a label that typically sets off tough rules and aggressive monitoring by regulators.

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**IBM**

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(Zoltan Tasi/Unsplash, modified by CoinDesk)

### Cryptocurrency

## The Fall of Terra: A Timeline of the Meteoric Rise and Crash of UST and LUNA

A detailed timeline of Terra's journey from its underdog start as a payments app in South Korea to a \$60 billion crypto ecosystem to one of the biggest failures in crypto.

By [Kristian Sandor](#), [Ekin Genc](#)

Updated Aug 19, 2022 at 10:20 a.m. MST Crypto Explorer >

[f](#) [in](#) [t](#) [e](#)

The Terra network and its leader, Do Kwon, rose to the highest tier of the crypto world thanks to big-shot investors, only to fall apart within a few days in May 2022.

On May 7, the price of the then-\$18-billion algorithmic stablecoin terraUSD (UST), which is supposed to maintain a \$1 peg, started to wobble and fell to 35 cents on May 9. Its companion token, LUNA, which was meant to stabilize UST's price, fell from \$80 to a few cents by May 12.

	<b>BTC</b>	\$22,214	+ 2.50%	→
	<b>ETH</b>	\$1,730.51	- 0.97%	→
	<b>BNB</b>	\$292.49	+ 0.07%	→
	<b>XRP</b>	\$0.354446	+ 1.12%	→
	<b>BUSD</b>	\$1.00	- 0.01%	→



E-yau: People's Bank of China began real-world testing in May 2020

**“We are concerned that the primacy of the U.S. Dollar could be in long-term jeopardy from wide adoption of digital fiat currencies... With the potential for digital currencies to further take on the characteristics and utility of paper money, it may become increasingly imperative that the Federal Reserve take up the project of developing a U.S. dollar digital currency.”**

**- Bipartisan Congressional Letter to Federal Reserve Chairman Powell, Oct. 2019**



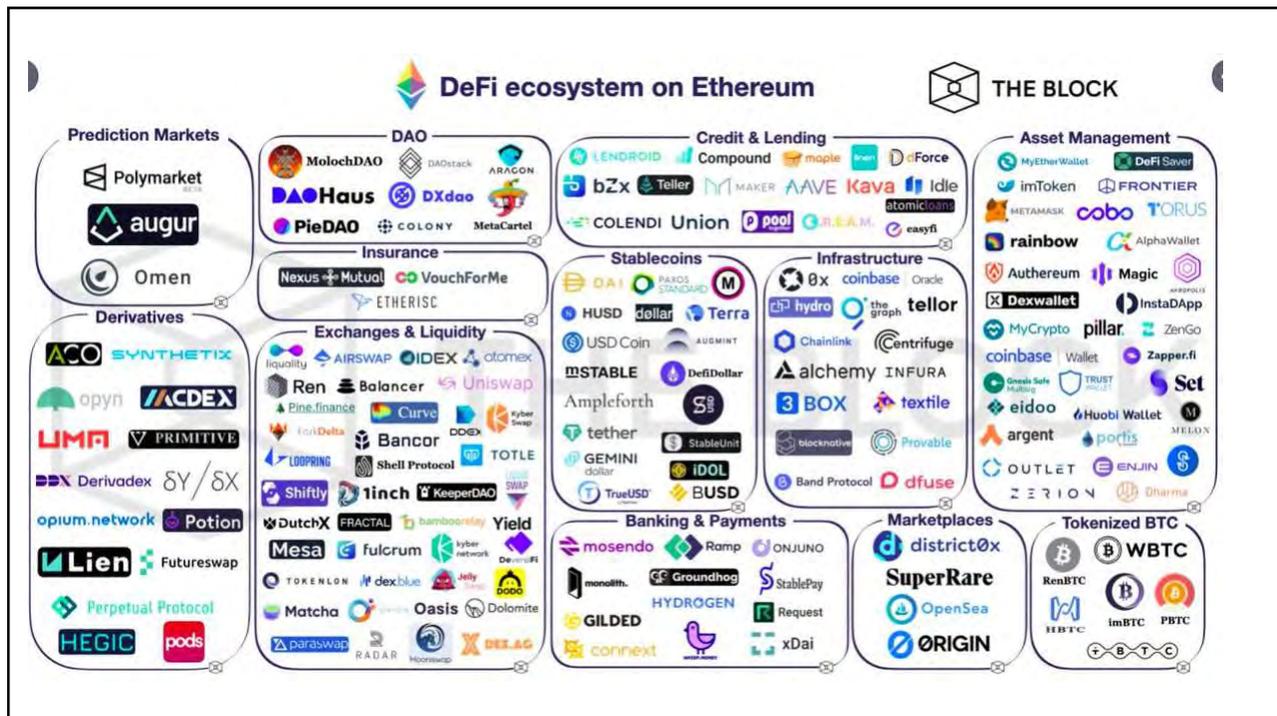
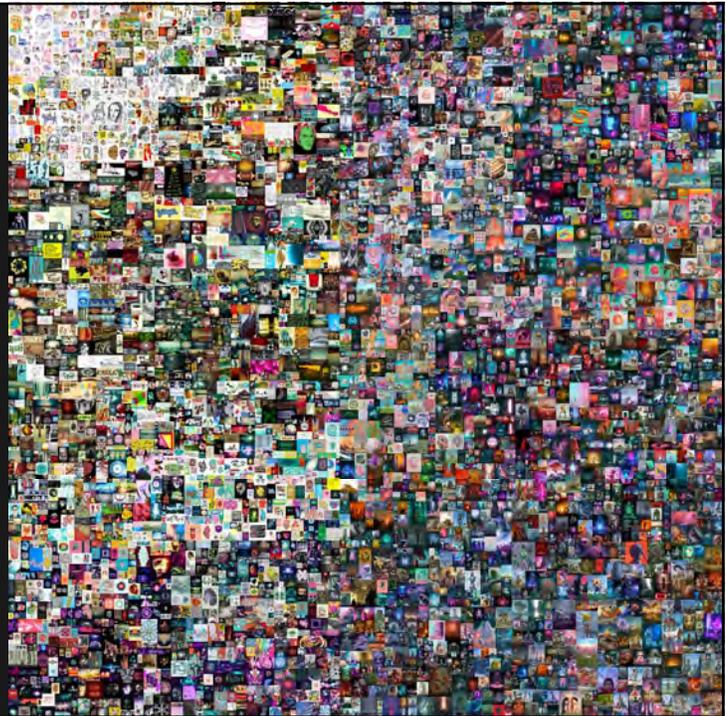
## What is an NFT?

Anything that can be **uniquely identified** and described with specificity on a programmable blockchain (such as Ethereum) can be “tokenized” as an NFT.

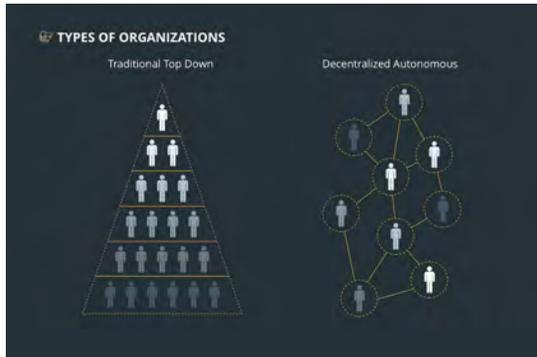
## NFT Examples

- Digital art
- Avatars
- Music
- GIFs
- Video clips
- Tweets
- collectibles
- Trading cards
- Gaming assets
- Real-world assets
- Domain names
- Sports moments
- Tickets
- Sneakers
- Virtual worlds
- Identities

In March 2021, an NFT for this collage of digital art sold for \$69 million



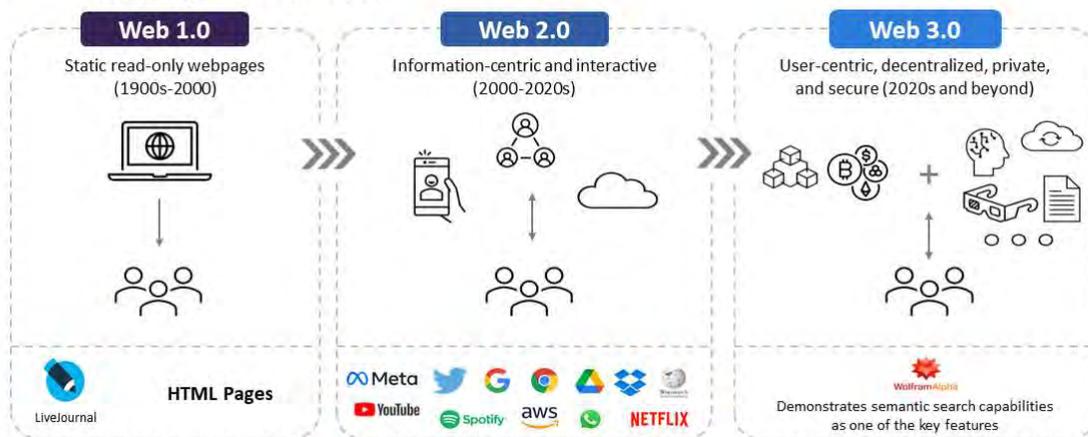
## DAOs



- DAO = Decentralized Autonomous Organization
- Smart contract based
- Horizontal leadership, flat hierarchies intended to level the playing field and provide truly democratic organizational governance
- Tokenized voting rights



## Web 3.0 is the evolution of the internet towards user-centric intelligent services



Source: GlobalData FutureTech Series Report

GlobalData.

## Part II: Legal and Regulatory Status of Blockchains and Cryptocurrencies

### Lots of People Losing Real Money

**Do Kwon is unlikely to face prison time for \$60 billion UST crypto wipeout — fines and lawsuits are more likely**

PUBLISHED THU, JUN 2 2022-10:11 AM EDT | UPDATED THU, JUN 2 2022-11:24 AM EDT

**MacKenzie Sigalos**  
@KENZIESIGNALS

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**Squid Game crypto token collapses in apparent scam**

© 2 November 2021

“The basic, overarching issue is that digital asset innovation has outpaced our regulatory framework.”

- Timothy Massad, Harvard University, formerly the chairman of the Commodity Futures Trading Commission

“Right now, we just don’t have enough investor protection in crypto. Frankly, at this time, it’s more like the Wild West. . . . In my view, the legislative priority should center on crypto trading, lending, and DeFi platforms.”

- Aspen Security Forum, Aug. 3, 2021



SEC Chairman Gary Gensler

“Yet almost no one is satisfied with the current state of regulation. Efforts by regulators, legislators and market participants have met resistance from one another. Consensus remains elusive– and will remain so until the reasons for the regulatory challenge are understood.”

-former SEC Chair Jay Clayton (WSJ, Aug 2022)

## Regulatory Uncertainty Greatest Problem For Blockchain Entrepreneurs, Says Producer

 [forbes.com/sites/cbovaired/2020/07/31/regulatory-uncertainty-greatest-problem-for-blockchain-entrepreneurs-says-producer](https://forbes.com/sites/cbovaired/2020/07/31/regulatory-uncertainty-greatest-problem-for-blockchain-entrepreneurs-says-producer)

July 31, 2020

## Regulatory Uncertainty Makes Cryptocurrency Deals Vulnerable to Litigation

While the SEC has indicated that the decentralized nature of the networks on which bitcoin and ethereum operate make those currencies “assets” and not “securities,” it has offered little concrete assurance when it comes to other cryptocurrencies.

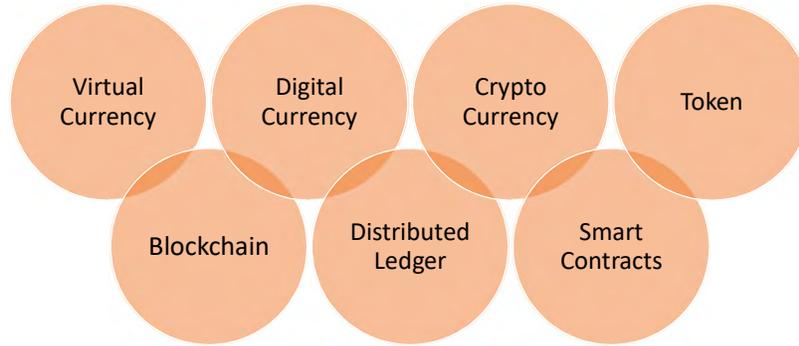
By **Kamal Ghali** and **Matthew Sellers** | May 20, 2021

## How opportunistic regulation can stifle innovation in blockchain

 [thenextweb.com/news/how-opportunistic-regulation-can-stifle-innovation-in-blockchain](https://thenextweb.com/news/how-opportunistic-regulation-can-stifle-innovation-in-blockchain)

December 3, 2018

# Definitions



Source: Caroline Lynch

# Alphabet Soup Of Agencies with Possible Jurisdiction



## Cryptocurrency Problem: Legal Status

• **Currency?**



• **Securities?**



• **Property?**



• **Commodities?**



## Are Cryptocurrencies “Securities”?

- In September 2018, William Hinman, the SEC Director of the Division of Corporation Finance, said that the cryptoasset Ether is not a security. It may have once been a security, but not today. As a result, transactions involving Ether are not securities transactions
- On June 25, 2019, SEC Chairman Jay Clayton confirmed that BTC does not meet the Howey test and is therefore not a security, but he declined to comment on the status of the ETH and XRP.
- In Sept. 2022, SEC Chairman Gary Gensler suggested that Ethereum may now be a security after its merge to use a proof of stake validation mechanism

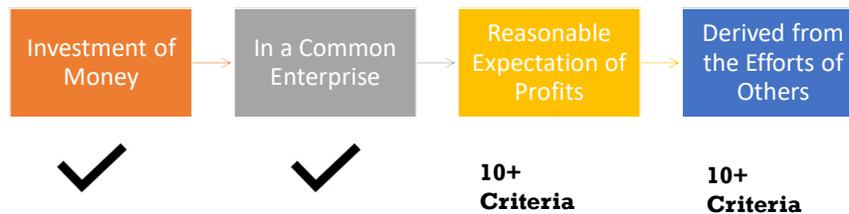


## The *Howey* Test

An "investment contract" exists when there is the investment of money in a common enterprise with a reasonable expectation of profits to be derived from the efforts of others.

*SEC v. W.J. Howey Co.*, 328 U.S. 293 (1946)

Source: Caroline Lynch



SEC Framework for "Investment Contract" Analysis of Digital Assets

Source: Caroline Lynch

## It's Time To End The SEC's 'Clarity' Charade On Crypto

**F** [forbes.com/sites/roslynlayton/2021/09/12/its-time-to-end-the-secs-clarity-charade-on-crypto](https://forbes.com/sites/roslynlayton/2021/09/12/its-time-to-end-the-secs-clarity-charade-on-crypto)

September 12, 2021

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For five years, investors and project developers in the \$2 trillion blockchain innovation space have been subjected to an increasingly maddening charade that the U.S. Securities and Exchange Commission (SEC) has called “regulatory clarity”. Years of SEC speeches, public statements, meeting records, correspondence and first-hand accounts from market participants provide anything but clarity for the rules on digital assets or distributed ledger technology (DLT) projects. This is another financial crisis in the making.

SEC Chairman Gary Gensler said at an Aspen Institute appearance this summer that the rules are “awfully clear” on crypto. In a recent interview with *Financial Times*, he urged developers to “talk to us, come in” because the fate of the industry, like all finance, “is about trust.” Few can see this “clarity”, but its absence is so acute that even the biggest U.S. companies in the blockchain industry can no longer count on the SEC to provide any clear guidance other than through a lawsuit.

"Of the nearly 10,000 tokens in the crypto market, I believe the vast majority are securities. "

— Securities and Exchange Commission chair Gary Gensler, reiterating his view on cryptocurrencies at a legal conference last Thursday.

## SEC Charges Ripple and Two Executives with Conducting \$1.3 Billion Unregistered Securities Offering

[sec.gov/news/press-release/2020-338](https://www.sec.gov/news/press-release/2020-338)

FOR IMMEDIATE RELEASE

2020-338

Washington D.C., Dec. 22, 2020 —

The Securities and Exchange Commission announced today that it has filed an action against Ripple Labs Inc. and two of its executives, who are also significant security holders, alleging that they raised over \$1.3 billion through an unregistered, ongoing digital asset securities offering.

According to the SEC's complaint, Ripple; Christian Larsen, the company's co-founder, executive chairman of its board, and former CEO; and Bradley Garlinghouse, the company's current CEO, raised capital to finance the company's business. The complaint alleges that Ripple raised funds, beginning in 2013, through the sale of digital assets known as XRP in an unregistered securities offering to investors in the U.S. and worldwide. Ripple also allegedly distributed billions of XRP in exchange for non-cash consideration, such as labor and market-making services. According to the complaint, in addition to structuring and promoting the XRP sales used to finance the company's business, Larsen and Garlinghouse also effected personal unregistered sales of XRP totaling approximately \$600 million. The complaint alleges that the defendants failed to register their offers and sales of XRP or satisfy any exemption from registration, in violation of the registration provisions of the federal securities laws.

## Virtual Currencies are Commodities

- The definition of “commodity” in the Commodity Exchange Act is broad.
  - It can mean a physical commodity, such as an agricultural product (e.g., wheat, cotton) or natural resource (e.g., gold, oil).
  - It can mean a currency or interest rate.
  - The CEA definition of “commodity” also includes “all services, rights, and interests . . . in which contracts for future delivery are presently or in the future dealt in.”
- The CFTC first found that Bitcoin and other virtual currencies are properly defined as commodities in 2015.‡
- The CFTC has oversight over futures, options, and derivatives contracts.
- The CFTC’s jurisdiction is implicated when a virtual currency is used in a derivatives contract, or if there is fraud or manipulation involving a virtual currency traded in interstate commerce.
  - Beyond instances of fraud or manipulation, the CFTC generally does not oversee “spot” or cash market exchanges and transactions involving virtual currencies that do not utilize margin, leverage, or financing.

‡ See, In the Matter of: Coinflip, Inc., d/b/a Derivabit, and Francisco Riordan, CFTC Docket No. 15-29, available at <http://www.cftc.gov/ido/groups/public/@lrenforcementactions/documents/legalpleading/enfcoinfliporder09172015.pdf>.

Source: Caroline Lynch

## CFTC: Cryptocurrencies

- According to CFTC, virtual currencies are a commodity.
  - Commodities are generally defined as any goods, articles, services, rights and interests “in which contracts for future delivery are presently or in the future dealt in.”
  - The CFTC first found that Bitcoin and other virtual currencies were properly defined as commodities in 2015, when it filed and settled charges against Coinflip, Inc. and Francisco Riordan for operating a trading facility for Bitcoin options without it being registered to trade commodities
  - On October 10, 2019, CFTC Chairman Heath Tarbert said, at the Yahoo All Markets Summit in NYC that Ether too is a commodity “and it would fall under our jurisdiction.”

## Litigation – CFTC

- In June 2016, BFXNA Inc., doing business as Bitfinex, which operated an online platform for trading cryptocurrencies, agreed to settle charges brought by the CFTC that it allegedly engaged in prohibited, off-exchange commodity transactions with retail clients and failed to register as an FCM, as required.
- On March 6, 2019, a federal court in New York affirmed that the CFTC has the authority to bring an enforcement action against a person that has engaged in fraud involving a virtual currency, even if the transaction does not involve a futures contract or other derivatives contract. The enforcement action was against CabbageTech, Corp. and Patrick McDonnell, its owner and controller, for unlawfully soliciting customers to send money and virtual currencies for virtual currency trading advice and for the discretionary trading of virtual currencies by Mr. McDonnell. The CFTC alleged that the defendants did not provide the promised services and misappropriated their customers’ funds.

## FinCEN Throws Down

- *Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies*, FIN-2013-G001 (March 18, 2013):



“A person that creates units of this convertible virtual currency and uses it to purchase real or virtual goods and services is a user of the convertible virtual currency and not subject to regulation as a money transmitter. By contrast, a person that creates units of convertible virtual currency and sells those units to another person for real currency or its equivalent is engaged in transmission to another location and is a money transmitter. In addition, a person is an exchanger and a money transmitter if the person accepts such de-centralized convertible virtual currency from one person and transmits it to another person as part of the acceptance and transfer of currency, funds, or other value that substitutes for currency.”

<https://www.fincen.gov/sites/default/files/shared/FIN-2013-G001.pdf>

Cryptocurrency and Money Transmission

89

### Bipartisan crypto regulatory overhaul would treat most digital assets as commodities under CFTC oversight

[cnbc.com/2022/06/07/bipartisan-crypto-bill-lummis-and-gillibrand-want-to-empower-cftc-treat-digital-assets-like-commodities.html](https://www.cnbc.com/2022/06/07/bipartisan-crypto-bill-lummis-and-gillibrand-want-to-empower-cftc-treat-digital-assets-like-commodities.html)

June 7, 2022

#### Key Points

- Sens. Cynthia Lummis and Kirsten Gillibrand introduced legislation Tuesday to create a regulatory framework for the crypto markets.
- The Lummis-Gillibrand bill would classify the vast majority of digital assets as commodities.
- The Responsible Financial Innovation Act would empower the Commodity Futures Trading Commission to regulate most of the industry.



<https://www.wsj.com/articles/secs-gensler-supports-commodities-regulator-having-bitcoin-oversight-11662641115>

MARKETS FINANCIAL REGULATION

## SEC's Gensler Signals Support for Commodities Regulator Having Bitcoin Oversight

Former CFTC chief says he could back giving agency oversight of nonsecurity tokens



By Andrew Ackerman

Updated Sept. 8, 2022 3:40 pm ET

WASHINGTON—Securities and Exchange Commission Chairman Gary Gensler signaled that he would support Congress handing more authority to the SEC's sister markets regulator to oversee certain cryptocurrencies such as bitcoin.

14143

Federal Register  
Vol. 87, No. 49  
Monday, March 14, 2022

### Presidential Documents

Title 3—

Executive Order 14067 of March 9, 2022

The President

Ensuring Responsible Development of Digital Assets

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Mandated multiple agency reports by Sept. 5, 2022:

1. DOJ et al. – Role of law enforcement agencies in international crypto investigations
2. OSTP – Environmental Implications of Crypto
3. U.S. Treasury – Potential financial implications of a Central Bank Digital Currency
4. OSTP – Technical analysis of issuing a CBDC (pending)
5. DOJ – Legal assessment of whether Congress must pass a law for US to implement a CBDC (pending)
6. U.S. Treasury – Risks & Rewards of Digital Assets in markets & payments (pending)
7. Commerce Dep't – Framework on U.S. economic competitiveness in Web3.0



Administration

SEPTEMBER 16, 2022

## FACT SHEET: White House Releases First-Ever Comprehensive Framework for Responsible Development of Digital Assets

 BRIEFING ROOM  STATEMENTS AND RELEASES

*Following the President's Executive Order, New Reports Outline Recommendations to Protect Consumers, Investors, Businesses, Financial Stability, National Security, and the Environment*

The digital assets market has grown significantly in recent years. Millions of people globally, including 16% of adult Americans, have purchased digital assets—which reached a market capitalization of \$3 trillion globally last November. Digital assets present potential opportunities to reinforce U.S. leadership in the global financial system and remain at the technological frontier. But they also pose real risks as evidenced by recent events in crypto markets. The May crash of a so-called stablecoin and the subsequent wave of

## Part III: Blockchains and Cryptocurrencies in the Courts and Practice of Law

## Blockchain: Legal Disruption

- Clients across spectrum of business and government will be increasingly deploying or using blockchains – attorneys will need to understand to provide competent advice
- Flurry of new laws and regulations affecting blockchains – attorneys needed to represent their client’s interests in such proceedings
- Some existing client businesses will disappear or shrink from blockchains; others yet to be created
- Blockchains have potential to transform, or replace, many areas of existing legal processes, functions and structures (e.g., trust, nature of contracts, etc.)



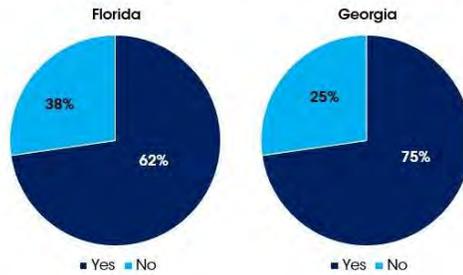
The image is a screenshot of a webpage from the ABA Journal. At the top, the ABA Journal logo is displayed in a dark blue header. Below the logo is a navigation menu with the following items: NEWS, IN-DEPTH, BLAWGS, and ABOUT. Below the navigation menu is a breadcrumb trail: Home / Daily News / Lawyers can contribute to the rise of blockchain... The main content area features the text 'ABA TECHSHOW' followed by the article title 'Lawyers can contribute to the rise of blockchain by understanding it' in a bold, black font. Below the title, the author's name 'BY GERARDO ALVAREZ' and the date 'MARCH 9, 2018, 9:30 PM CST' are listed. A social media sharing bar is visible, showing 'Like 2', 'Share', 'Tweet', and 'Share' buttons, along with a small icon for a shareable link. At the bottom of the article preview is a large, glowing blue image of a handshake, symbolizing agreement or partnership, with a digital, grid-like texture overlaid on it.

NEWS

## 'It's Insane!': How Lawyers Are Cashing In on the Cryptocurrency Practice Area

"For the right people, the right level of experience, on a scale of 1 to 10, it's at an 11," said Tal Lifshitz, a partner with Kozyak Tropin & Throckmorton in Coral Gables. "There are a lot of lawyers and practices that are just starting to flirt with that as a practice area."

Am Law 200 Firms Headquartered in Florida or Georgia that have a Formal Cryptocurrency/Blockchain Practice Listed on their Website



Law.Com

**Blockchain  
Litigation is  
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Above: A display of Bitcoin in Hong Kong, China, on Friday, Feb. 4, 2022. Photographer: Paul Young/Bloomberg

### Crypto Lawsuit Deluge Has Big Firms Scrambling to Keep Up

May 17, 2022, 2:30 AM

- New regulations, class cases keeps practices growing
- Crypto lawyers say recent downturn just a "correction"

Cryptocurrency litigation is soaring, prompted by a surge of investors in the space, and US proposals promise more rules to fight over in coming months and years.

Crypto has generated more than 200 class action lawsuits and other private litigation as of this month, up more than 50% since the start of 2020, according to Morrison Cohen, which tracks the activity. Half of all crypto litigation are class actions or private suits, according to the firm's data.

**Related Articles**

- Crypto Sizzles Is Feeding the Wider Selloff in Global Markets: May 12, 2022, 4:31 AM
- SEC's Gensler Says Crypto Exchanges Too Risky to Operate: May 12, 2022, 4:31 AM

## Legal Issues

- These expanding blockchain issues raise many novel legal issues:
  - Regulatory compliance
  - Data privacy and security
  - Access to data and resources on blockchain
  - Smart contracts
  - International trade rules
  - Liability
  - Courtroom admissibility
  - Criminal investigations
  - Due diligence
  - eDiscovery of blockchain data
  - Law firm records management

## Litigation Example: DAOs -- Who is Responsible?

May 2022 —

A first-of-its-kind putative class action lawsuit filed in the Southern District of California is testing the legal argument that a decentralized autonomous organization (DAO) is a general partnership exposing its members to joint and several liability. In this case, *Sarcuni et al v. bZx DAO et al.* (S. D. Cal., May 2, 2022), the plaintiffs allege that bZx DAO, its co-founders and its members are jointly and severally liable for negligence by failing to adequately secure a decentralized finance (DeFi) protocol, resulting in the theft of \$55 million. . . .

Most importantly for those considering whether to implement a DAO structure, the complaint alleges that because the DAO lacks any legal formation or recognition, it is a general partnership and thus its members are jointly and severally responsible for “making good” to the plaintiffs for their collective loss of an estimated \$1.6 million. The plaintiffs are seeking full compensation for their losses, along with putative damages and attorneys’ fees.

<https://www.skadden.com/insights/publications/2022/05/putative-class-action-lawsuit-alleges-dao-members>



*The verifiable integrity of Blockchain records, linked and secured using cryptography, could soon be used in a variety of innovative ways to resolve court recordkeeping challenges. At the same time, Blockchain presents new legal issues that courts must be prepared to address.*

**When Might Blockchain Appear in Your Court?**

Di Graski, Consultant, National Center for State Courts  
Paul Embley, Chief Information Officer, National Center for State Courts

## Court Use Cases – Integrated Justice Information Systems (IJIS) Institute (2018)

- Digital assets: validation of associated metadata and transactions (eg digital evidence management)
- Arrest warrants: issue to dissemination
- Protection orders: issue to dissemination
- Criminal history: disposition recording
- Criminal history: validation of data as part of dissemination
- Law enforcement: sharing of officer testing and certification
- Dispatch: resource sharing between agencies
- Information sharing: API for digital notarization of documents
- Law enforcement: interagency de-confliction

# Blockchain as a Legal Technology

## Automatic Efficiency

- The secure, immutable and transparent nature of blockchain will allow attorneys to record and authenticate many types of legal matters including contracts, corporate filings, chain of custody, real estate, intellectual property rights, or any other ledger-based activity.



HAYSTACK

15

BLOCKCHAIN

## Why Blockchain Belongs in the Courtroom

*Blockchain technology imbues several features that make it appealing for use in courtroom proceedings.*

68



Are to quote

NEXT ARTICLE ►

“Blockchain technology imbues several features that make it appealing for use in courtroom proceedings..... Perhaps most importantly, the blockchain is capable of protecting digital expressions of evidence, ensuring that all parties have access to the appropriate information while also guaranteeing an item's providence and veracity. With the blockchain, input from different parties can be added, recorded and distributed, providing a fully digital experience to a courtroom infrastructure that is progressively relying on an electronic approach to legal proceedings. Most importantly, this evidence can be cryptographically sealed, proving its providence and securing its authenticity.”

## China decides 3M court cases on blockchain-powered platform

coingeek.com/china-decides-3m-court-cases-on-blockchain-powered-platform

December 21, 2019



China has now settled over 3 million court cases on the blockchain in just nine months. The country's Supreme Court ruled that blockchain could authenticate evidence in September 2018. Since then, smart courts have become quite popular, taking advantage of AI and blockchain technology to ease the judicial process.

## Service of Process on Blockchain

### A proof of concept by ServeManager and Integra Ledger

ServeManager has created a functional proof of concept for service of process on blockchain. Utilizing the technology from Integra Ledger, - blockchain for the law - data related to service of process attempts are posted to blockchain.



The current proof of concept allows a process server in the field to post the metadata related to their attempt within ServeManager - gps coordinates, timestamp, device data - to blockchain which generates a unique ID for that attempt.

This ID could then be made available in the attempt information within ServeManager, and on the physical affidavit itself. The ID can then be queried to display the untampered attempt data allowing a court, law firm, governing body or party to the case to verify that data on the affidavit or related service of process records are accurate and have not been altered.

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Holland & Knight's office

NEWS

### In New Approach, Big Law Firm Uses NFT to Serve Court Papers on Anonymous Defendants

\*This gives us one mechanism to at least serve legal process on a person who controls an address that's involved with the virtual currency that was affected,\* said Andrew Balthazor of Holland & Knight.

June 09, 2022 at 03:12 PM

🕒 4 minute read

Innovation



Michael A. Mora

#### What You Need to Know

- Miami attorneys at Holland & Knight served the first NFT temporary restraining order on anonymous defendants, according to the law firm's extensive research.
- The defendants are accused of swindling nearly \$8 million in Ethereum blockchain virtual assets.
- This maneuver provides a new strategy in serving anonymous defendants that previous forms of service, such as in-person or via email, lacked.



Policy
Technology
Web3
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Binance Coin ▲ \$203.52 +0.20%
Binance USD ▲ \$0.999343 +0.04%
Cardano ▼ \$0.429209 -0.29%
Stellar ▼ \$0.19595 -1.25%
Solana ▼ \$30.51 -0.03%
Cryptos

## The CFTC Served Ooki DAO Papers by Posting Them in an Online Discussion Forum

The CFTC's motion for alternative service asks a California judge to approve of the unconventional way Ooki DAO members were served.

By [Cheyenne Ligon](#) 🕒 Sep 27, 2022 at 7:56 p.m. MST 🕒 Updated Sep 28, 2022 at 9:10 a.m. MST



The Commodity Futures Trading Commission (CFTC) used unorthodox methods to serve a lawsuit against the pseudonymous members of a decentralized autonomous organization (DAO), according to court documents filed on Tuesday.

	BTC	\$20,000
	ETH	\$1,330
	XRP	\$0.48

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA

COMMODITY FUTURES TRADING  
COMMISSION,

Plaintiff,

v.

OOKI DAO,

Defendant.

Case No. [3:22-cv-05416-WHO](#)

**ORDER GRANTING PLAINTIFF'S  
MOTION FOR ALTERNATIVE  
SERVICE**

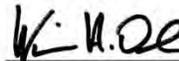
Re: Dkt. Nos. 11, 13

This Court, having read and considered Plaintiff Commodity Futures Trading Commission's ("the Commission") Motion for Alternative Service Against Defendant Ooki DAO [Dkt. No. 11], the Commission's Administrative Motion to Supplement Motion for Alternative Service Against Defendant Ooki DAO [Dkt. No. 13], and the evidence and papers with respect thereto, and good cause appearing therefore:

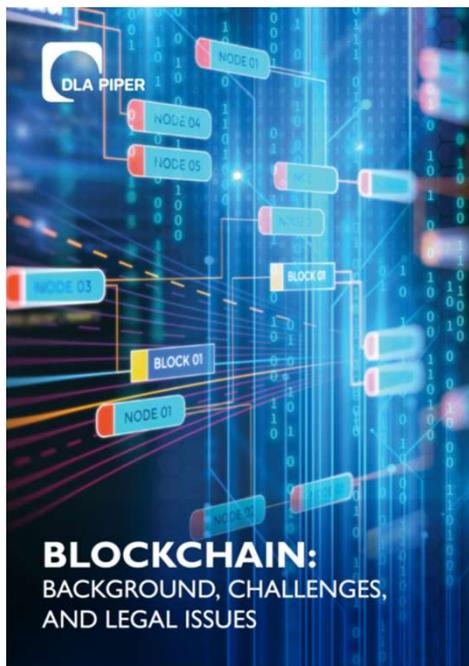
The Motions are GRANTED and the Court orders that service of process on the Ooki DAO may be made in this action by providing a copy of the summons and complaint through the Ooki DAO's Help Chat Box, with contemporaneous notice by posting in the Ooki DAO's Online Forum. Because the Commission provided the documents in this manner on September 22, 2022, the Court holds that the Commission effectively served the Ooki DAO on that date.

**IT IS SO ORDERED.**

Dated: October 3, 2022



William H. Orrick  
United States District Judge



## JURISDICTION

Blockchain has the ability to cross jurisdictional boundaries as the nodes on a blockchain can be located anywhere in the world. This can pose a number of complex jurisdictional issues which require careful consideration in relation to the relevant contractual relationships.

The principles of contract and title differ across jurisdictions and therefore identifying the appropriate governing law is essential. In a conventional banking transaction, for example, if the bank is at fault then irrespective of the transacting mechanism or location, the bank can be sued and the applicable jurisdiction will most likely be contractually governed. However, in a decentralised environment, it may be difficult to identify the appropriate set of rules to apply.

At its simplest level, every transaction could potentially fall under the jurisdiction(s) of the location of each and every node in the network. Clearly, this could result in the blockchain needing to be compliant with an unwieldy number of legal and regulatory regimes. In the event a fraudulent or erroneous transaction is made, pinpointing its location within the blockchain could be challenging.

The inclusion of an exclusive governing law and jurisdiction clause is therefore essential and should ensure that a customer has legal certainty as to the law to be applied to determine the rights and obligations of the parties to the agreement and which courts will handle any disputes.

## Public Records on the Blockchain?

- Land titles
- Vehicle registries
- Business incorporations
- Criminal records
- Passports
- Birth certificates
- Death certificates
- Voter Registration
- Voting Records
- Health/safety inspections
- Building permits
- Court records

EDITOR'S PICK | 487,541 views | Oct 16, 2018, 12:06pm

### IRS Followed Bitcoin Transactions, Resulting In Takedown Of The Largest Child Exploitation Site On The Web



Kelly Phillips Erb Senior Contributor @ Taxes



GETTY

The largest dark web child pornography site in the world has been taken down. That was the word today from the U.S. Attorney's Office

“Our agency’s ability to analyze the blockchain and de-anonymize bitcoin transactions allowed for the identification of hundreds of predators around the world.”



NATIONAL

## How A New Team Of Feds Hacked The Hackers And Got Colonial Pipeline's Ransom Back

June 8, 2021 2:08 AM ET

 VANESSA ROMO


The Justice Department has assembled a new task force to confront ransomware after what officials say was the most costly year on record for the crippling cyberattacks. It managed to recover \$2.3 million of the ransom paid by Colonial Pipeline in an attack earlier this year, the department announced Monday.

Andrea Hernandez

The Department of Justice on Monday touted the recovery of \$2.3 million — about half — of the ransom that was collected by hackers in the Colonial Pipeline attack last month. Experts say it was a surprising outcome to an increasingly frequent and severe crime.

## Court Admissibility



### Could Blockchain Evidence Be Inadmissible?

By Casey C. Sullivan, Esq. on May 5, 2016 12:04 PM

Blockchain technology creates a virtually incorruptible, dispersed database of all transactions in a network. It's the technology that helped make Bitcoin a (relative) success, but it's often hailed as a potentially transformative technology in finance, business, and the law. There are contracts that use the blockchain, for example. There may one day even be entire government databases based on blockchain technology.

But, as James Ching recently pointed out, there could be a downside to all the blockchain hype. It's possible that blockchain evidence may be inadmissible hearsay.

ASU Law School  
Workshop on  
Admissibility of  
Blockchain  
Records) – fall  
2018

## Legislative or Rules Solutions

- Arizona:
- 2018 amendments to the Electronic Transactions Act to include Blockchain evidence, Smart Contracts, and digital signatures.
- Such electronic records “may not be denied legal effect, validity, or enforceability.”



### Washington:

- 2019 legislation on the validity of the Distributed Ledger Text (DLT), validating Blockchain as proof and evidence accepted in court.

### Illinois:

- 2020 Blockchain Technology Act, providing that: “in a legal proceeding, evidence of a Smart Contract, Blockchain record, or electronic signature must not be excluded solely because a blockchain was used to create, store, or verify the smart contract, record, or signature.”

## Blockchain: The Latest Addition to the e-Discovery Checklist

- The scope of eDiscovery has expanded to new sources and types of ESI over the years:
  - Computers
  - Email
  - Tablets and laptops
  - Smart phones
  - Social media
  - Cloud based platforms
  - IOT devices
  - AI systems
- Now preparing and responding to discovery requests must consider:
  - Blockchain and cryptocurrency records

## Examples of Contexts in Which Blockchain Evidence Would be Relevant

- Divorce case in which one of parties was suspected of hiding money in crypto accounts
- Bankruptcy case in which entity that declared bankruptcy engaged in a series of illegitimate transfers of assets using crypto before filing
- Food poisoning case in which food distributor used blockchain to track supply chain from farm to fork
- Product manufacturer keeps records of safety incidents for its product lines that may be relevant to product liability lawsuit
- Medical provider record of patient interactions kept on blockchain may be useful in medical case
- Opposing party's use of privacy coins and mixers to try to hide assets may be relevant to a fraud case

## Advantages of Blockchain for Discovery

- “Because blockchains create redundant and persistent data and are distributed in nature, they're ideal for record keeping. ... For instance, attorneys will have information in which they feel confident, such as who actually owns the note of a particular property .... Chain of custody will be more solid because the blockchain will reveal whether a document has been manipulated, whether it is what it purports to be, and whether all data that is supposed to come with the document is actually there.”

• Adam Brill, *Blockchain Brings Opportunities, Challenges to Legal Discovery*

## Challenges of Blockchain for Discovery

'That design and level of privacy makes blockchain, "challenging for e-discovery," says Antigone Peyton of Protorae Law. "Traditionally, we have records. We interrogate the system. We pull records and we do something with them. Blockchain is the antithesis of that. There is no interrogation of records. You understand limited things about the transactions, maybe timestamps, but that's about it." ... This means that lawyers need to invest in education and tools. Right now, there are very few people with the technical know-how to actually explore all of the publicly available data on the blockchain. Attorneys will also need to think differently when it comes to discovery and blockchain is involved. "The traditional concepts relating to e-discovery just aren't applicable when we think about gathering data from the blockchain," Peyton says.

- Adam Brill, *Blockchain Brings Opportunities, Challenges to Legal Discovery*

## Discovery

- General pseudo-anonymity of blockchain can challenge discovery
- Key points:
  - Public vs private blockchains
  - Crypto activity artifacts often remain on device
  - Focus on nodes of entry and exit from blockchain (AML, KYC, etc)
  - Can often track transactions or clusters of transaction on transparent blockchain
  - Blockchain forensic companies may be helpful

## How To Take Discovery of Blockchain: Public vs Private Chains

- If private blockchain, then identifiable validation authority available to serve discovery requests on
- If public blockchain, transactions are anonymous; no central authority “with possession, custody or control” to serve
  - Take discovery at entry points to blockchain – i.e., crypto exchanges
    - *Paige v. Bitconnect*: plaintiffs accusing a crypto exchange of operating Ponzi scheme were permitted to obtain disclosure of all wallet addresses, trading account addresses, and identity of account holders
    - *ZG TOP Tech. Co. v. Doe* – crypto exchange hacked; transaction lead to a single account with another exchange; sued anonymous hacker and sought and granted discovery of 2<sup>nd</sup> exchange to identify hacker

## Artifacts on Devices

- If you have access to the opponent’s computer or smart phone, might be able to find artefacts of crypto transactions on device
- If computer has a crypto “wallet,” obtain hard drive image of wallet and search for relevant files (“wallet.dat file”)



<https://www.sans.org/white-papers/36437/>

**Blockchain.com** | Wallet | Exchange | Explorer | Buy Bitcoin | Trade

Explorer > Bitcoin Explorer > Address

**Address** USD BTC

This address has transacted 299 times on the Bitcoin blockchain. It has received a total of 1,503.21397998 BTC (\$28,599,457.70) and has sent a total of 1,500.73214304 BTC (\$28,552,239.42). The current value of this address is 2.48183694 BTC (\$47,218.29).

**Address:** 1Q2mDx5rDo3g6j0HAJeysDVivesqyZ56L9

**Format:** BASE58 (P2PKH)

**Transactions:** 299

**Total Received:** 1503.21397998 BTC

**Total Sent:** 1500.73214304 BTC

**Final Balance:** 2.48183694 BTC

**Transactions**

**Fee:** 0.00003360 BTC (15.067 sat/B - 3.767 sat/WU - 223 bytes)

**Hash:** 7f2b486c6dca08a74b9a17f698c60b0e24587a476b361737ecb6bb1784a373e

1Q2mDx5rDo3g6j0HAJeysDVivesqyZ56L9      2.49916375 BTC

3GLiNTcRwu9qYfQZByKmWDIRcsMjAW3WP  
1Q2mDx5rDo3g6j0HAJeysDVivesqyZ56L9

-0.01732081 BTC  
UNCONFIRMED  
2022-10-10 19:35  
0.017293 BTC  
2.48183694

# Crypto Analytics/Forensics



**ELLIPTIC**



## eDiscovery of Blockchain Data: Practical Considerations

- Who is in “possession, custody or control” of blockchain records?
- How will blockchain data formats “fit” existing ediscovery software
- Blockchain discovery will likely require significant costs, computing power and technical expertise to access and understand data on blockchains
- ESI could be produced on a blockchain in the future – creating a transparent, verifiable, secure and immutable record of documents that is available to all parties in a litigation
  - Replacing Bates numbering
- Blockchain can also provide a reliable chain of custody for evidence

BLOCKCHAIN

### Why Blockchain Belongs in the Courtroom

*Blockchain technology imbues several features that make it appealing for use in courtroom proceedings.*

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“Blockchain technology imbues several features that make it appealing for use in courtroom proceedings..... Perhaps most importantly, the blockchain is capable of protecting digital expressions of evidence, ensuring that all parties have access to the appropriate information while also guaranteeing an item's providence and veracity. With the blockchain, input from different parties can be added, recorded and distributed, providing a fully digital experience to a courtroom infrastructure that is progressively relying on an electronic approach to legal proceedings. Most importantly, this evidence can be cryptographically sealed, proving its providence and securing its authenticity.”

# What Should We Do About Deep Fakes: Blockchain Solution?

As Deepfake Videos Spread, Blockchain Can Be Used to Stop Them

[cointelegraph.com/news/as-deepfake-videos-spread-blockchain-can-be-used-to-stop-them](https://cointelegraph.com/news/as-deepfake-videos-spread-blockchain-can-be-used-to-stop-them)

By Sritanshu Sinha

October 9, 2019

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## Crypto Fund Sues Faegre Baker for Legal Malpractice

SEC issued a cease and desist order against the predecessor of the crypto fund.

Friday, 03/01/2020 | 04:14 GMT-7 by Arnab Shome

News legal



“No matter what area of law you practice, expect that your clients will soon bring you questions related to blockchain technology.”

– Bernard Marr, Forbes, Aug. 15, 2017

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## As Blockchain Booms, Law Firm Recruiting Tries to Keep Up

Don't be fooled by the cryptocurrency crash—legal recruiters say there's still huge demand for blockchain expertise, as well as lawyers who understand data privacy.

By MP McQueen | April 17, 2019

It's no secret that blockchain and cryptocurrency are fast-growing specializations within the financial industry—JPMorgan Chase & Co. just [tested](#)



Photo: Shutterstock

# Questions?

