The Blockchain Ledger

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Linking Assets Inc.

In this Ledger

Linking Assets Inc. publishes *The Blockchain Ledger* with articles and information regarding blockchain, cryptocurrency, virtual currency, digital assets, and their intersections with state unclaimed property laws. Keeping you informed of pertinent unclaimed property implications and related developments.

Blockchain- A Colossal Paradigm Shift

By Christa DeOliveira & Ari Mizrahi

Blockchain and distributed ledger technology represent paradigm shifts in how data is stored, updated, and verified; this is markedly different from centralized ledgers. Traditionally, data's "single source of truth" was a central repository complete with elements, primary keys, and pertinent details in the database. Whereas, with blockchain there are multiple copies of the data in multiple places and the truth or accuracy is determined by a consensus algorithm across them.

There is a lot of information and definitions available online, in books, articles, etc. on blockchain. One alternative for obtaining a primer on blockchain is Wikipedia.[1] Another alternative can be found on Investopedia.[2]

Blockchain databases leverage distributed ledger technology. However, it is important to note, distributed ledgers are not used exclusively for blockchain. Distributed ledgers have shared and synchronized consensus of replicated data. This data can be distributed across multiple sites, encompassing different companies or institutions. Also, it can be distributed across geographical regions and countries.

With distributed ledger technology there is no central administrator; rather, the database is spread across multiple nodes on peer-to-peer networks. Nodes[3] are computing participants, such as computers or servers. These computing devices are all connected to each other and continuously exchange the ledger data with each other, keeping all the nodes in sync and up to date. No single person or group has control; instead, all users collectively retain control. Depending on which respective blockchain, voting or proof of work occurs through consensus algorithms on which replicated copies are verified and need to be accepted as correct. For changes to be made, the nodes must agree on how to update the blockchain before it can be updated. This occurs in a matter of seconds or minutes and then any changes made to the ledger are manifested and copied across all nodes.

At its core, a blockchain is a complete list of transactions that are transparent so anyone can view and verify. For example, Bitcoin's blockchain, contains a full record of every Bitcoin transaction back to its inception. One example of how blockchain works is to picture the chain of a ship's anchor.[4] Instead of links being made from metal links, imagine the links of the chain as chunks of information called blocks. These blocks contain the real-time, chronological transaction records held together with cryptography. At the top of the chain are the most recent transactions and all transactions are timestamped. Moving down the chain, older transactions become visible- all the way back to the inception. All decentralized blockchains are

[1] https://en.wikipedia.org/wiki/Blockchain
[2] https://www.investopedia.com/terms/b/blockchain.asp
[3] A full node contains a full copy of the blockchain's transaction history.
[4] https://www.coinbase.com/learn/crypto-basics/what-is-a-blockchain

immutable;[5] therefore, the data entries are not reversible, and a full history is available. In the case of public blockchains, there is a fully transparent history of transactions offering integrity and trust and the security works to thwart manipulation attempts.

A centralized ledger can be prone to cyber-attacks and fraud, as there is a single point of failure. In contrast, the need for a central administrator or authority to guard against manipulation is eliminated using blockchain.

Key News & Developments Highlights

OFAC Sanctions Suex, for the first time the U.S. Treasury's Office of Foreign Asset Control has added a foreign crypto exchange to the blacklist of specially designated nationals. This designation places Suex in the same category as terrorists and drug traffickers. OFAC determined Suex has facilitated transactions perpetrating ransomware attacks. It is projected as much as 40% of Suex's volume is connected to malicious activity.

OFAC releases an Advisory on potential sanction risks for facilitating ransomware payments. The Advisory announces potential sanctions for facilitating ransomware payments. As ransomware attacks have increased throughout the pandemic with malicious actors targeting people in the U.S. working online. The Advisory warns companies facilitating ransomware payments, not only promotes future ransomware attacks, but also carries risks of violating OFAC regulations. Payment facilitators includes "financial institutions, cyber insurance firms, and companies involved in digital forensics and incident response."[6]

Coinbase is launching a NFT platform. The Exchange has plans to launch a marketplace that allows users to mint, collect, and trade non-fungible tokens (NFTs. Currently, prospective users may sign up for a waiting list for early access. NFTs are unique digital assets that designate ownership of digital items, such as art, music, collectible trading cards, etc. They are not fungible, meaning they cannot be exchanged one for one like you can with cryptocurrencies.

China bans crypto trading and mining, in the end of September, Chinese regulators vowed to intensify the crackdown on the blanket ban on both crypto transactions and mining. Earlier, in May, China banned companies from providing services and supporting crypto transactions. Similar bans were issued in 2013 and 2017. It is speculated the move is to prevent volatile digital currencies from undermining China's control of its financial and monetary systems. Multiple ministries will band together to root out illegal crypto activity "including the central bank, financial, securities and foreign exchange regulators."[7] This is the first time Beijing-based regulators have combined forces and openly quash all cryptocurrency related activity. Not surprisingly, Chinese crypto traders are trying to find methods around the ban.

The **SEC has approved the Volt Bitcoin Revolution ETF** which includes a portfolio of "Bitcoin Industry Revolution Companies and Technology Companies" trading under the ticker symbol BTCR.[8] Many of the companies in the portfolio hold significant amounts of Bitcoin and other cryptocurrencies on their balance sheets. The fund will include shares in about 30 companies including Tesla, MicroStrategy, Coinbase, and Marathon Digital Holdings. This approval comes about a week after U.S. regulators postponed its decisions on open Bitcoin ETF applications.

Facebook has launched Novi, a new cryptocurrency digital wallet. Coinbase will support it.

[5] Starting from the beginning with the first transaction, there is a cryptographic hash function recording the transaction. This is generated based on the transaction details and the encryption algorithm. Transaction two's hash is based on the transaction two's details and the first hash. This continues, each transaction contains a new hash using the previous hash and current transaction's details to generate the current hash. Therefore, to change any one transaction, each previous transaction in the chain would have to be changed. Keeping in mind the voting/proof of work transactions would still need to reach consensus across all nodes to permit any changes. This intentional design is to make blockchain immutable.

[6] https://home.treasury.gov/system/files/126/ofac_ransomware_advisory_10012020_1.pdf

[7] https://www.reuters.com/world/china/china-central-bank-vows-crackdown-cryptocurrency-trading-2021-09-24/

[8] https://www.sec.gov/ix?doc=/Archives/edgar/data/0001508033/000150803321000024/r497c1021.htm.