

Chain of Ownership, Centralized Ledger Currency

Concept Overview

The Centralized Ledger Cryptocurrency (CLC) is a fixed-supply digital currency designed to maintain value stability by preventing inflationary dilution. All CLC coins are minted using a PoW scheme (Proof of work), ensuring a controlled entry of coins into circulation.

Centralized Ledger System

CLC operates on a centralized public ledger, hosted on a dedicated server that manages all transactions. This ledger maintains a structured record of individual coins, each identified by a unique ID. Instead of representing a balance, a COC token is defined by its **chain of ownership** - a historical list of previous owners.

Ownership Structure & Security

Each coin's ownership history is recorded as a sequence of public keys. Ownership is represented by **single-use elliptic key pairs** (disposed after the coin holder transacts the coin), where only the public keys are stored within the ledger. Private keys remain confidential and are never included in the ownership chain.

Transactions

To transfer ownership, the current owner must authorize the transaction by **cryptographically signing the new owners public key** with their private key. This process appends the new owner's public key to the coin's chain, alongside the previous owner's signature, ensuring a secure and verifiable transfer of ownership. This approach is revolutionary, **allowing a centralized ledger without giving a single entity the authority to modify the ledger in any way.**

Coin Verification

To verify the ownership of a coin without exposing sensitive details, the owner must sign a predefined string with their private key. The recipient can then cross-check this signature with the last recorded public key in the ledger to ensure authenticity and validity.

Advantages of Chain of Ownership Coin

1. PoW scheme: Ensures stability and prevents inflation.
2. Enhanced Security: Public keys are recorded while private keys remain confidential, private keys never leave the holders machine.
3. Decentralized Trust: Ownership history is transparent while still maintaining security.
4. Immutable Ledger: Transactions cannot be altered, ensuring transparency and security.

5. No Central Authority Control: The ledger operates without granting modification power to any single entity.

Coin Ledger Example Visualization

coin id	height 1			height 2		
1						
	previous owner	owner	transaction signature	previous owner	owner	transaction signature
	none	john	none	john	adam	john's signature
2						
	previous owner	owner	transaction signature	previous owner	owner	transaction signature
	none	john	none	john	doug	john's signature

Conclusion

The Chain of Ownership CLC (Centralized Ledger Cryptocurrency) introduces an innovative approach to centralized digital currencies by implementing an immutable chain of ownership. With verifiable ownership transfers, and robust security measures, CLC stands as a viable solution for digital transactions, asset tokenization, and secure record-keeping. By eliminating the ability for a single entity to alter transaction records, CLC ensures long-term stability, trust, and usability in a wide range of applications.

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