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(57) Abstract :

The proposed invention introduces a system and method for securely sharing secrets through blockchain technology. The Secret Division Module (102) utilizes a secret sharing algorithm to divide the secret into multiple parts, preserving its confidentiality. The Blockchain Network Module (104) consists of multiple nodes equipped with hardware devices enhancing the security of secret storage and cryptographic operations. The Distribution Module (106) facilitates the distribution of secret parts among nodes in the decentralized blockchain network, ensuring redundancy and fault tolerance. The Cooperation Module (108) enforces collaboration among nodes, preventing any single node from accessing the original secret without cooperation from others. A distributed key generation module (110) generates and distributes the decryption keys among the group members Additionally, the Integrity Module (112) leverages the immutability and tamper-proof properties of the blockchain to maintain the integrity and transparency of the shared secret. This innovative approach provides a robust solution for secure secret sharing and distribution in a decentralized environment.

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