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Blockchain Account Technology: A Systematic Literature Review of Security, Privacy and Mass Adoption in Human Digital Future

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ABSTRACT

The blockchain market value reached $3 trillion before falling to $1 trillion(1), and has since recovered to $1.5 trillion now. It is a rising and huge market, most on-chain assets are protected by encryption technology, commonly known as blockchain account. Ensuring the security of blockchain account is paramount.

This paper presents a comprehensive review of blockchain account development, encompassing both academic and industry perspectives. From traditional bank account models to Bitcoin accounts, EVM-adaptable accounts, and account abstraction accounts, this research provides in-depth insights into the design and evaluation of these account models, with a focus on security.

Additionally, the paper compares the trade-offs between account models in terms of security, cost, and convenience(mass adoption), presenting statistical data based on several account models.

Finally, the paper discusses the future of blockchain accounts, providing researchers with an overview of account theory across different models to guide their own blockchain research endeavors.

KEYWORDS: Blockchain, Account, Private key, Security, Privacy, Mass Adoption