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**A Study of Blockchain-Based Approach for Secure Transfer of  
Information in The IoD Ecosystem**

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**ABSTRACT**

The Internet of Devices (IoD) ecosystem consists of numerous interconnected smart devices that continuously exchange information through the internet. These devices include sensors, smart appliances, wearable gadgets, and industrial machines that communicate with each other to perform automated tasks and provide intelligent services. As the number of connected devices increases, ensuring the secure transfer of information becomes a significant challenge. Traditional centralized security systems often face risks such as data tampering, unauthorized access, and single-point failure. To overcome these limitations, a blockchain-based approach can be used to provide a secure and reliable method for information transfer within the IoD ecosystem. Blockchain technology operates on a decentralized network where data is stored in encrypted blocks that are linked together chronologically. Each transaction is verified by network participants through consensus mechanisms, ensuring transparency and trust among devices. This decentralized structure prevents unauthorized modifications and enhances data integrity. In addition, cryptographic techniques in blockchain protect sensitive information during communication between devices. Smart contracts can also be implemented to automate authentication and data-sharing processes, allowing only authorized devices to participate in the network. As a result, blockchain improves security, transparency, and reliability in IoD communication systems. Therefore, adopting a blockchain-based approach can significantly strengthen the protection of information transfer and build a secure environment for interconnected devices in the IoD ecosystem.