



Blockchain and  
Cryptocurrency

# Blockchain Adaptability in Internet of Thing (IoT) Environments

Muhammad Abraruddin Khan, Adeel Tahir, Ashfaq Anjum Shaik, Zainab Fatima

Advisor: Dr. Omar Abuzaghleh

Department of Computer Science

University of Bridgeport, Bridgeport, CT

## Abstract

- Blockchain is considered to be a disruptive technology as like an Internet. The features of blockchain are giving more expectations in their applications. Internet of Things is emerging day by day with millions of connecting devices. Even though Internet of Things is evolving, the security of the internet of things is questionable with its architecture.

## Introduction

- Internet of Things rely on a centralized server is vulnerable to the data breach. The trust in the centralized architecture is also questionable. We require the decentralized technology for IoT to secure their communication. This is a peer to peer, decentralized, distributed network that does not support the centralized architecture where the data are stored in the common ledger. The cryptographic hash is used in the blockchain, which provides the feature of tamper-proof to the blockchain.
- Blockchain is providing transparency in the network with the shared ledgers. In this paper, we are going to survey the blockchain adaptability in various IoT environments for finding future research to improve the application of blockchain with Internet of Things.

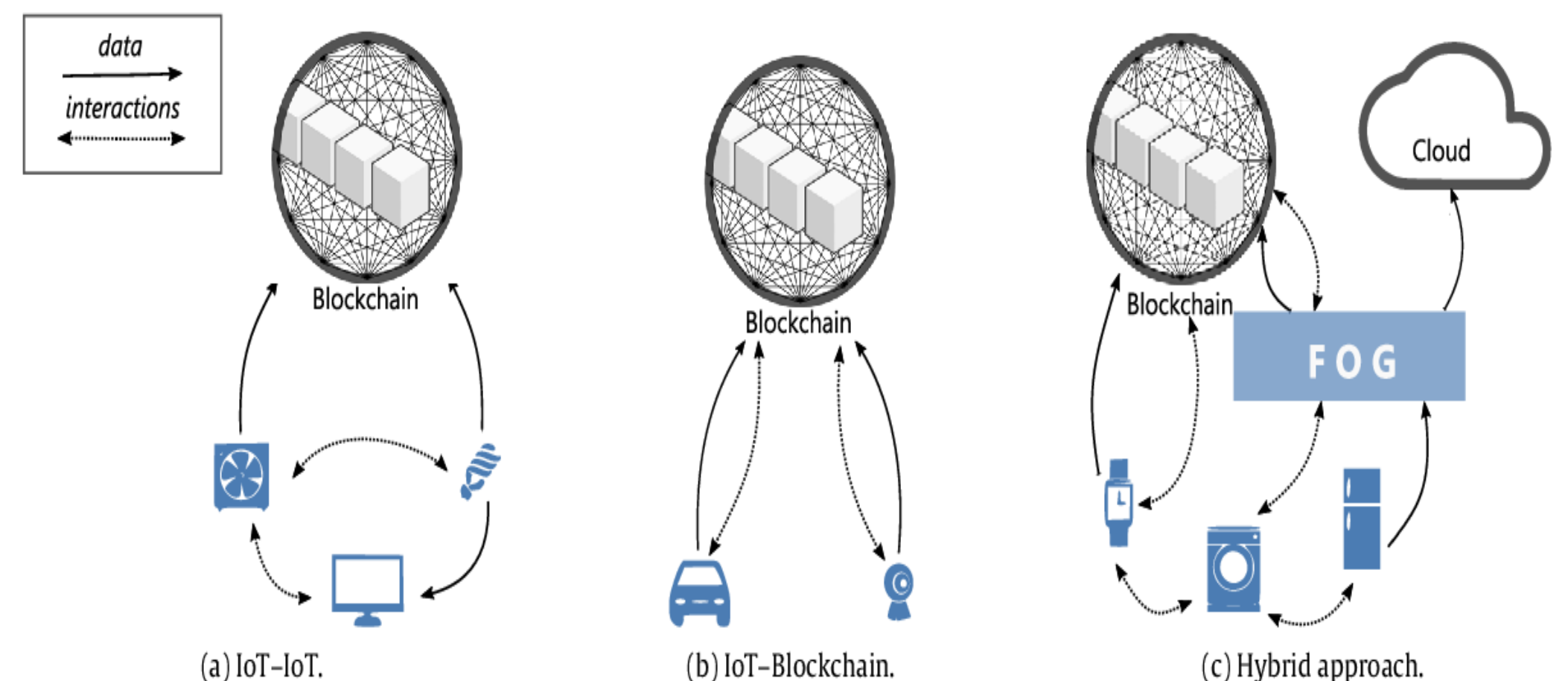
## Summary

- We will see what are thing that can be improved to make the blockchain easy to use in internet of things and provide awareness among people that how you can use blockchain in IoT.

## Challenges in Blockchain-IoT Integrations

- Storage capacity and scalability
- Security
- Anonymity and data privacy
- Smart contracts
- Legal issues

## Blockchain IoT interactions



## Merits of proposed project

- Decentralization and scalability
- Identity
- Secure code deployment
- Security and Reliability

## References

- S. Nakamoto, Bitcoin: A peer-to-peer electronic cash system, 2008.
- M. Díaz, C. Martín, B. Rubio, State-of-the-art, challenges, and open issues in the integration of internet of things and cloud computing.