A permissioned blockchain prototype facilitating banking record interoperability

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Declaration

Test text

Abstract

Acknowledgements

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Introduction

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Background Literature

2.1 Defining Blockchain Technology

2.1.1 Background

Blockchain technology reaches back far further than the inception of Bitcoin, and we can see some of the first implementations appearing in 1998. In a 1998 white paper titled bmoney, we see some of the earliest building blocks of cryptocurrencies and the adoption of blockchain technologies (Dai 1998). Wei Dai outlines some cornerstone concepts that would later inspire Satoshi Nakamoto to create Bitcoin. Wei begins to outline a form of Zero Knowledge proof where two parties involved in an exchange or transaction use pseudonyms in the form of public keys to identify themselves within the context of a transaction (*Zero-Knowledge Proofs — Ethereum.Org* 2022). Furthermore, Wei beings laying the foundation of cryptographically complex puzzles that are solved to determine the value of the currency transferred. The concepts mentioned above would eventually lead to one of the crucial components of blockchains known as proof of work.

New paragraph

2.1.2 Types of Blockchains

Permissionless

Permissioned

Consortium

2.1.3 Blockchain Components

Cryptographic Hash Functions

Transactions

Asymmetric-Key Cryptography

Addresses

Ledgers

Blocks

Chaining Blocks

2.1.4 Consensus

Proof of Work (PoW)

Proof of Stake (PoS)

Delegated Proof of Stake (DPoS)

Proof of Elapsed Time (PoET)

Practical Byzantine Fault Tolerance (PBFT)

2.1.5 Smart Contracts

2.2 Organisational Interoperability

2.3 Facilitating Interoperability using Blockchain Technology

2.4 Blockchain Technology in Banking Organisations

Chapter 3

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Bibliography

Dai, Wei (1998). *Bmoney*. URL: `http://www.weidai.com/bmoney.txt` (visited on 08/18/2022).

Zero-Knowledge Proofs — Ethereum.Org (2022). URL: `https://ethereum.org/en/zero-knowledge-proofs/` (visited on 10/11/2022).

Appendix A

Appendicies