

Project Outline

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1 Research area and working title

1.1 Research Area

1.1.1 Blockchain

1.2 Working Title

1.2.1 Connecting Blockchain of Blockchains to centralised systems and decentralised ledger systems (also known as blockchain technology)

2 Abstract

(Belchior et al. 2021) state that "blockchains of blockchains are frameworks that provide reusable data, network consensus, incentive, and contract layers for creating application-specific blockchains (customised blockchains) that interoperate between each other." They further outline that there is a current gap in the research regarding connecting existing centralised systems such as traditional banking systems as well as decentralised ledger systems such as blockchains to other blockchains.

3 Proposed Research Problem and Research Question

3.0.1 Research Problem

3.0.2 Research Questions

RQ1 Do the current cross-chain solutions provide mechanisms to connect to centralised and decentralised ledger systems?

RQ2 Does the proposed Visa universal payment channels solution support bridging solutions?

RQ3 Are off-chain solutions problematic for the paradigm under which blockchains operate?

4 Proposed Aims and Objectives

5 Proposed Research Design

Action research

I want to use action research.

6 Artefact/s that can be created

References

Belchior, Rafael et al. (Oct. 4, 2021). “A Survey on Blockchain Interoperability: Past, Present, and Future Trends”. In: *ACM Computing Surveys* 54.8, 168:1–168:41. ISSN: 0360-0300. DOI: 10.1145/3471140. URL: <http://doi.org/10.1145/3471140> (visited on 03/18/2022).