



Team Big Time Conceptual Architecture Report

<https://www.youtube.com/watch?v=iQ33cjeC6mo>



Team Members

Lucas Wong- Team Lead

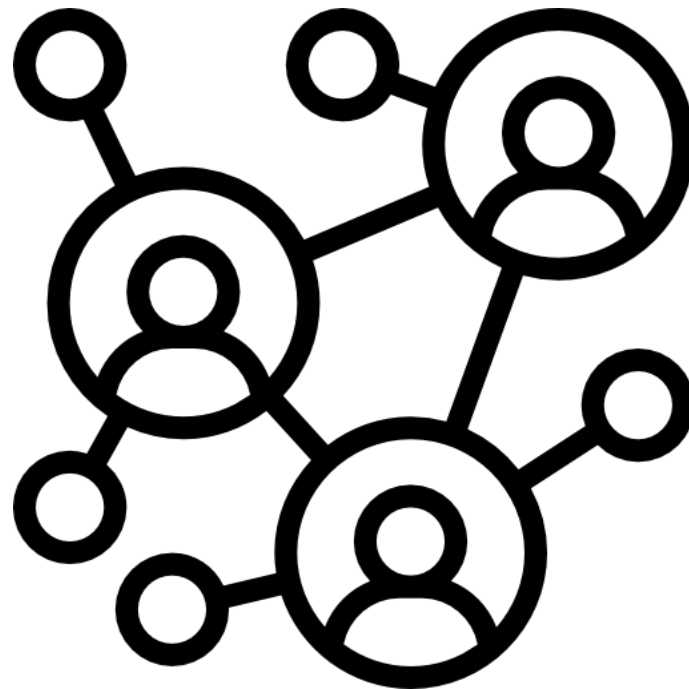
Azeem Khan- Presenter

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Oscar San

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Break Down

- Derivation Process
- Conceptual Style
- Architectural Style
- Evolution Process
- Control and Data Flow
- Concurrency



Derivation Process

1. Topic of Research
2. Analysis of Structure
3. Solidifying Core Components
4. Final Architecture





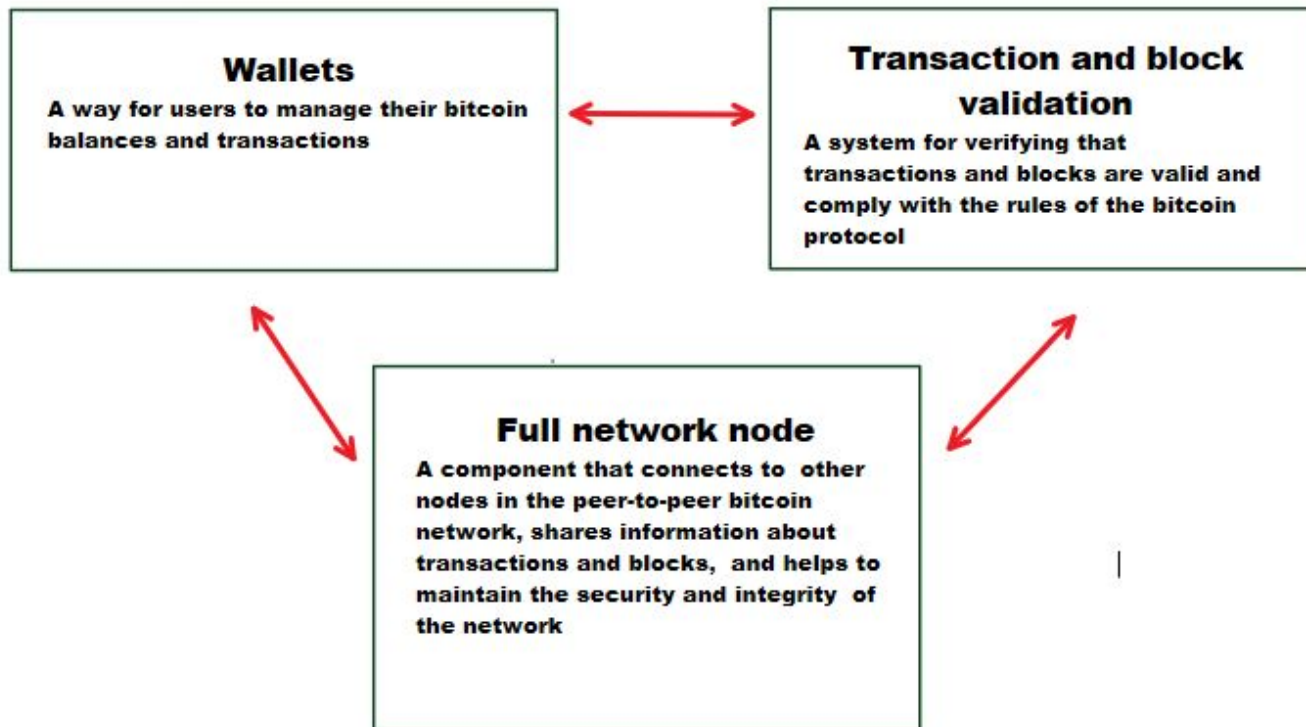
Conceptual Architecture

A modular system with components mostly independent of each other. Allowing for high reusability and ease of updating. A Peer to Peer Network.

Comprise of the following:

- Wallets
- Transaction and Block Validation
- Full Network Node





Subcomponent interaction



Evolution Process

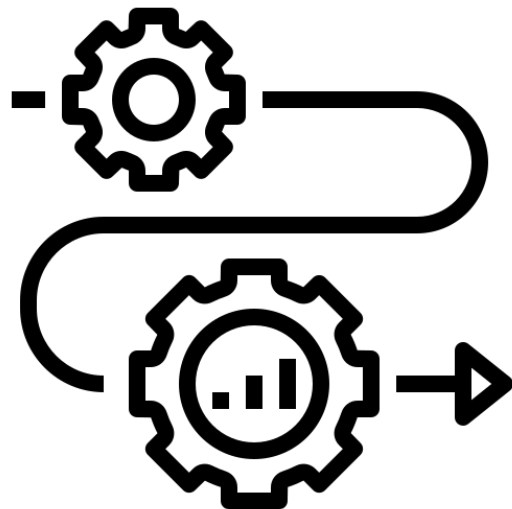
2013 Update V0.8: Performance and Security

2017 Update V0.13: Segregated Witness

2018 Update V0.13: Bech2 & Lightning Network

2019 Update V 0.19: Schnorr Signatures

2021 Update V 0.21: Taproot





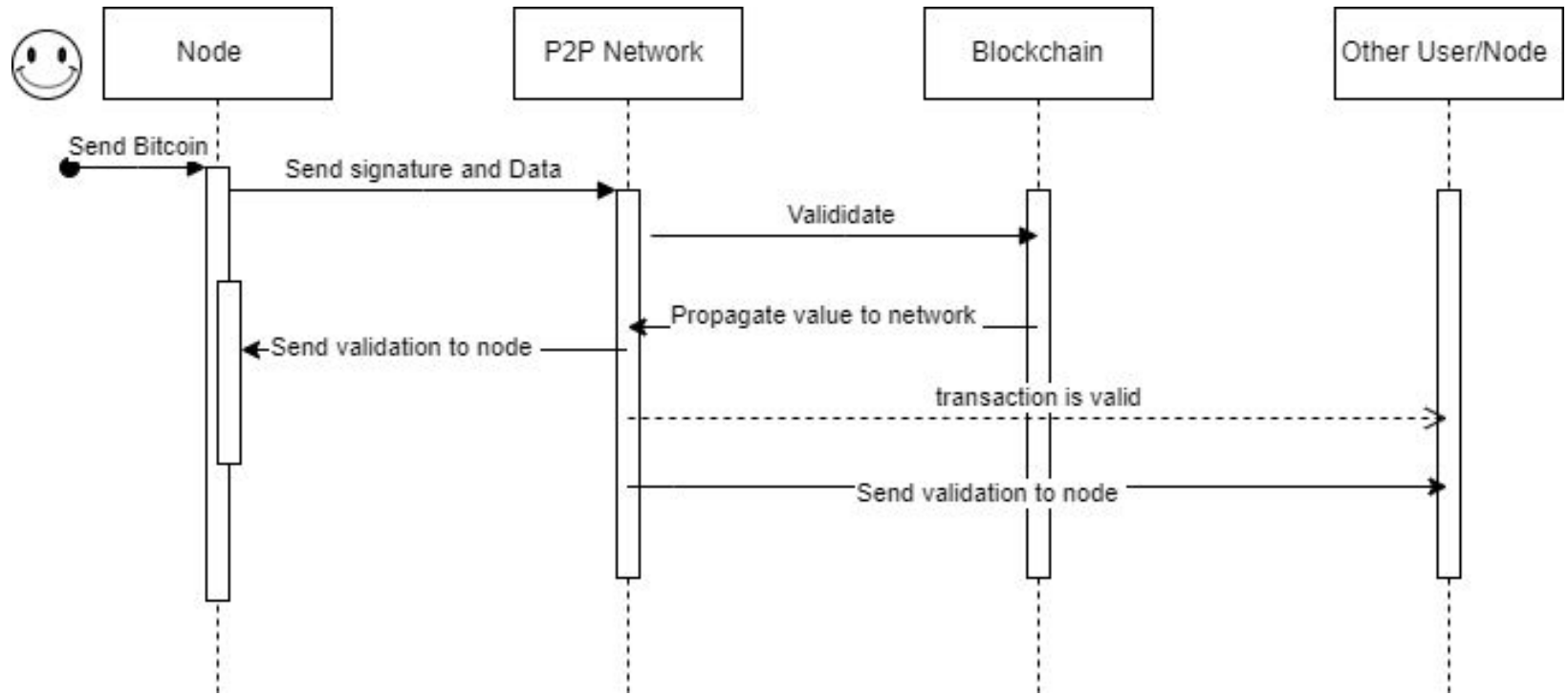
Control and Data Flow

Data Flow

- Network Communication
- Transaction Processing
- Block Validation

Control Flow

- User Input
- Configuration
- Mining



Sequence Diagram

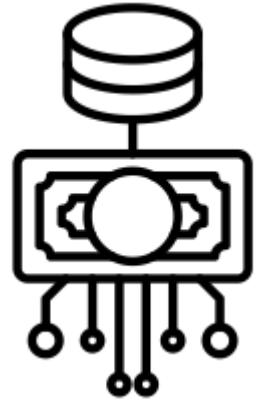


Concurrency

Each node in the P2P network collects new transaction into blocks.

All new transaction are broadcasted to other nodes.

Validation Process





Lessons Learned & Closing Statements

