

BITCOIN CORE:

Concrete Architecture



A presentation by Sweet Home Ala-Bram-A



Bitcoin Core



YouTube



New Chat



GitHub

Sweet Home Alabama

Group 34

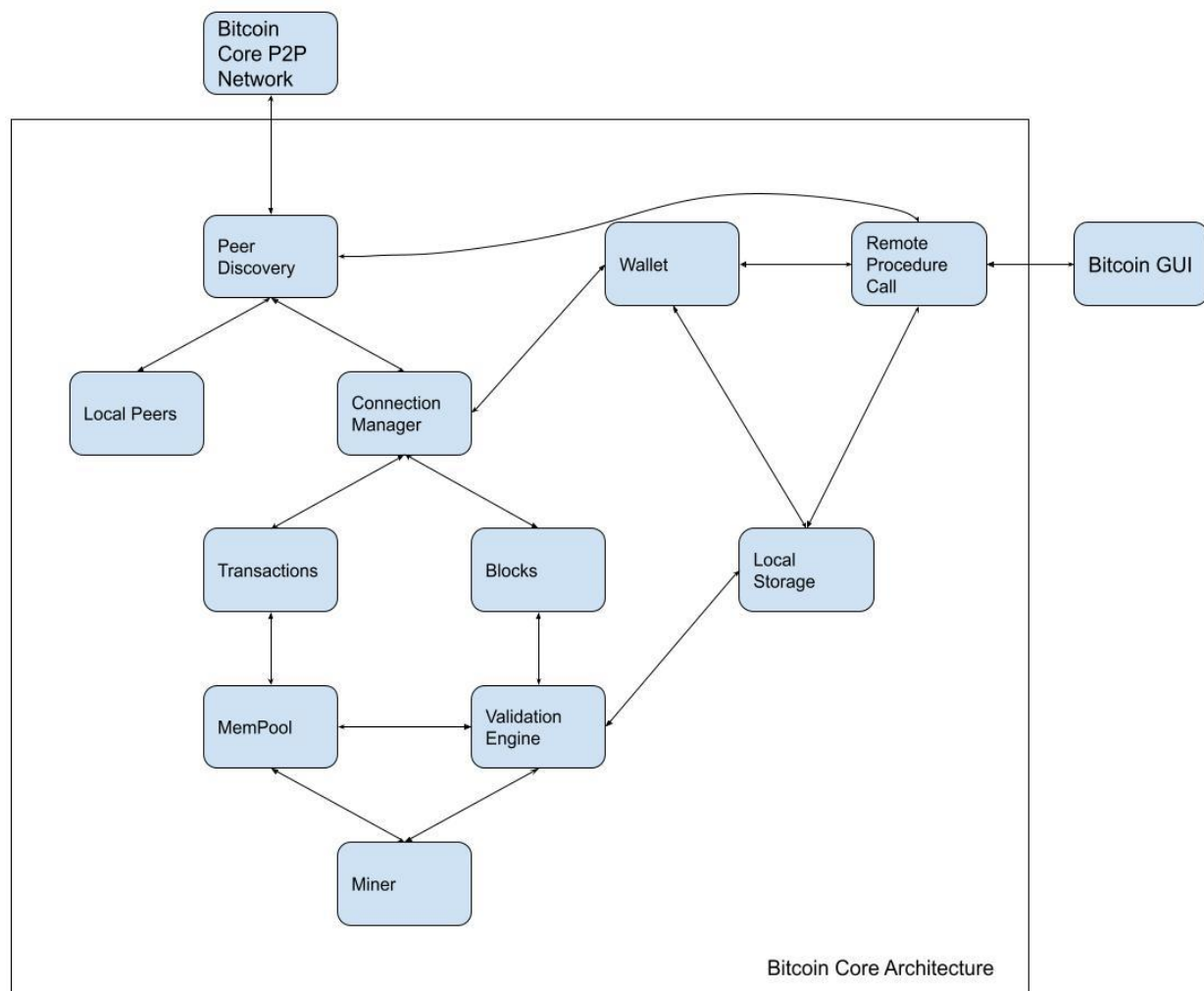


<https://youtu.be/NwczrMjljUk>



Jp LeBlanc (Team Leader)
Dallas Doherty (Presenter)
Ethan Mah (Presenter)
Ruairi O'Connor Clarke
Muhammad Ibrahim
Mayy Mounib

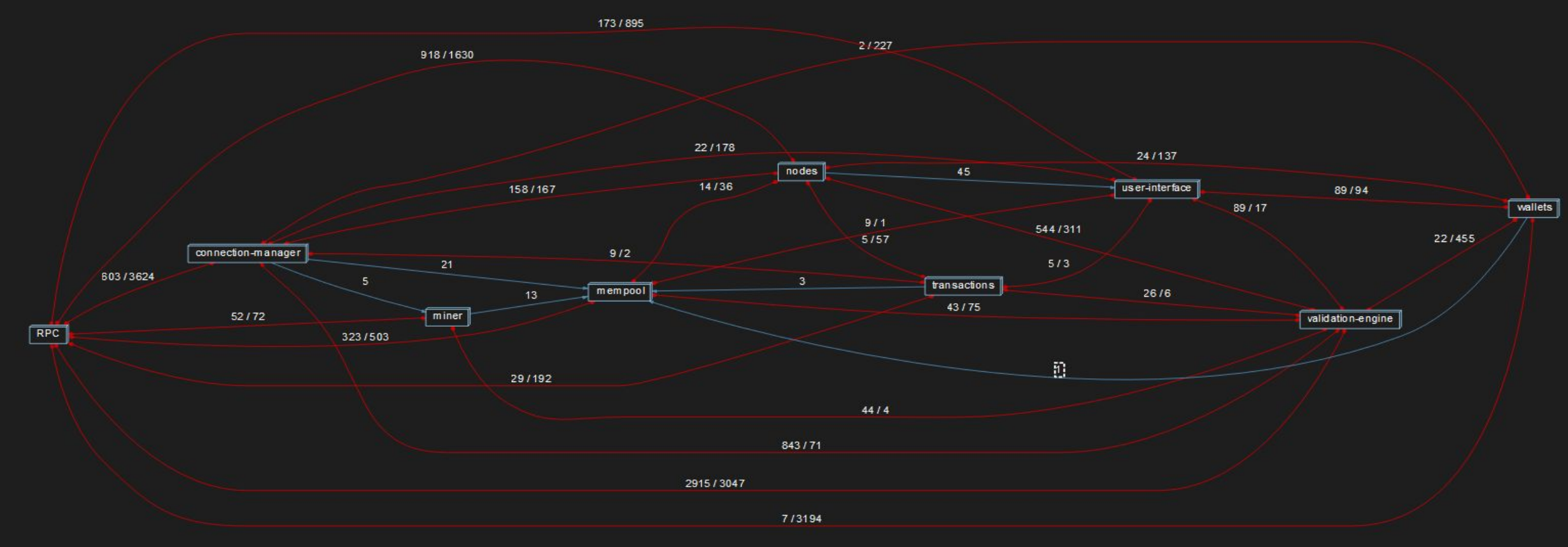
What was our conceptual architecture?



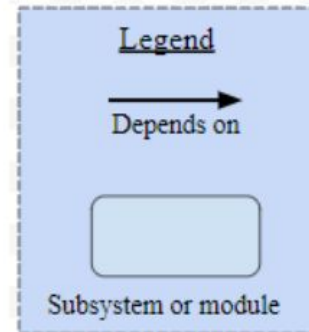
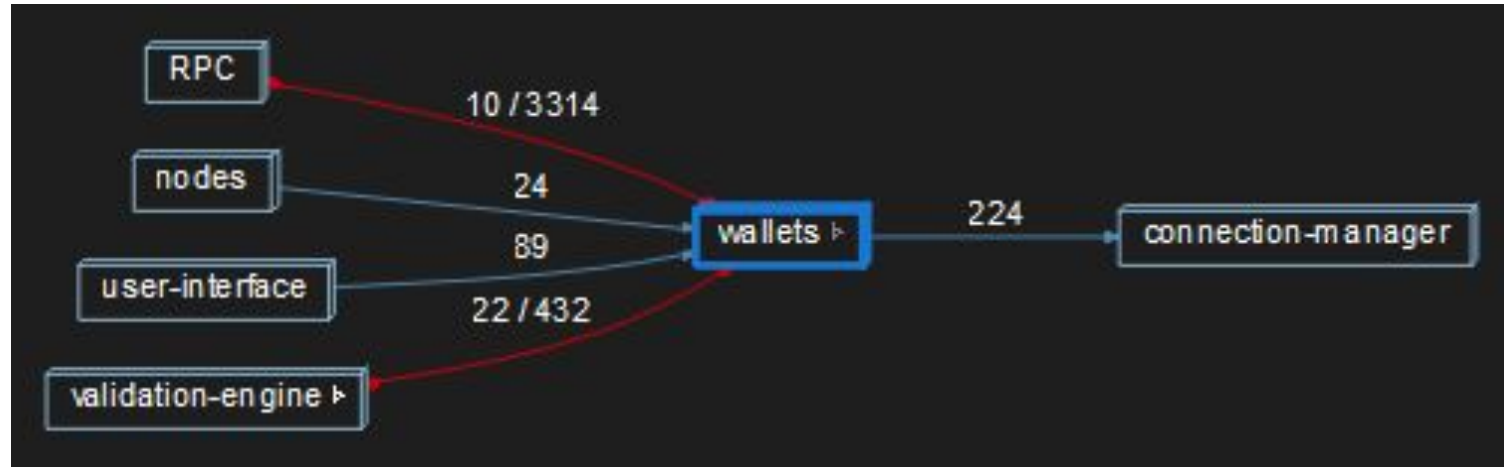
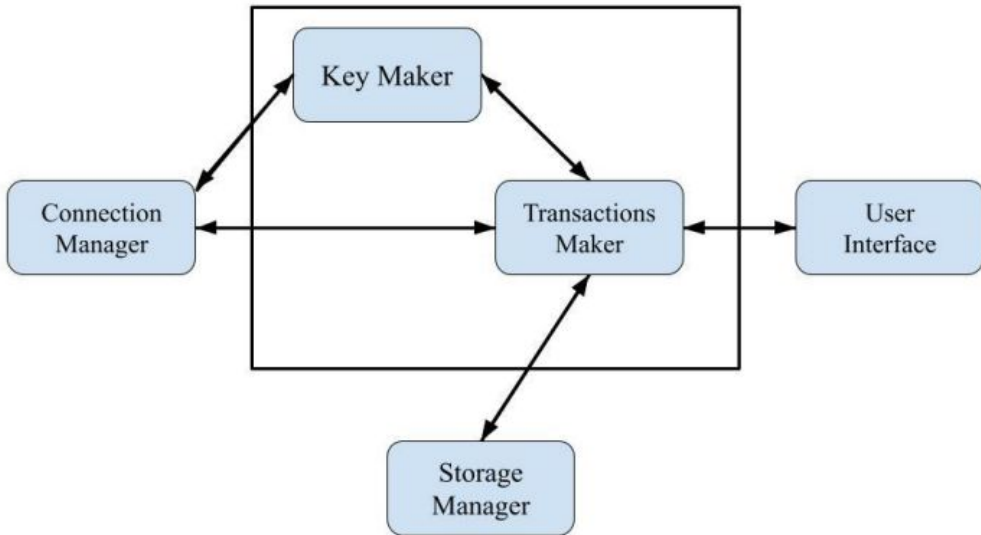
Conceptual Architecture:

Peer to Peer Network
Four layers:
Network
Transaction
Blockchain
Application

Concrete Architecture Alternative



Conceptual Vs Concrete: Wallet



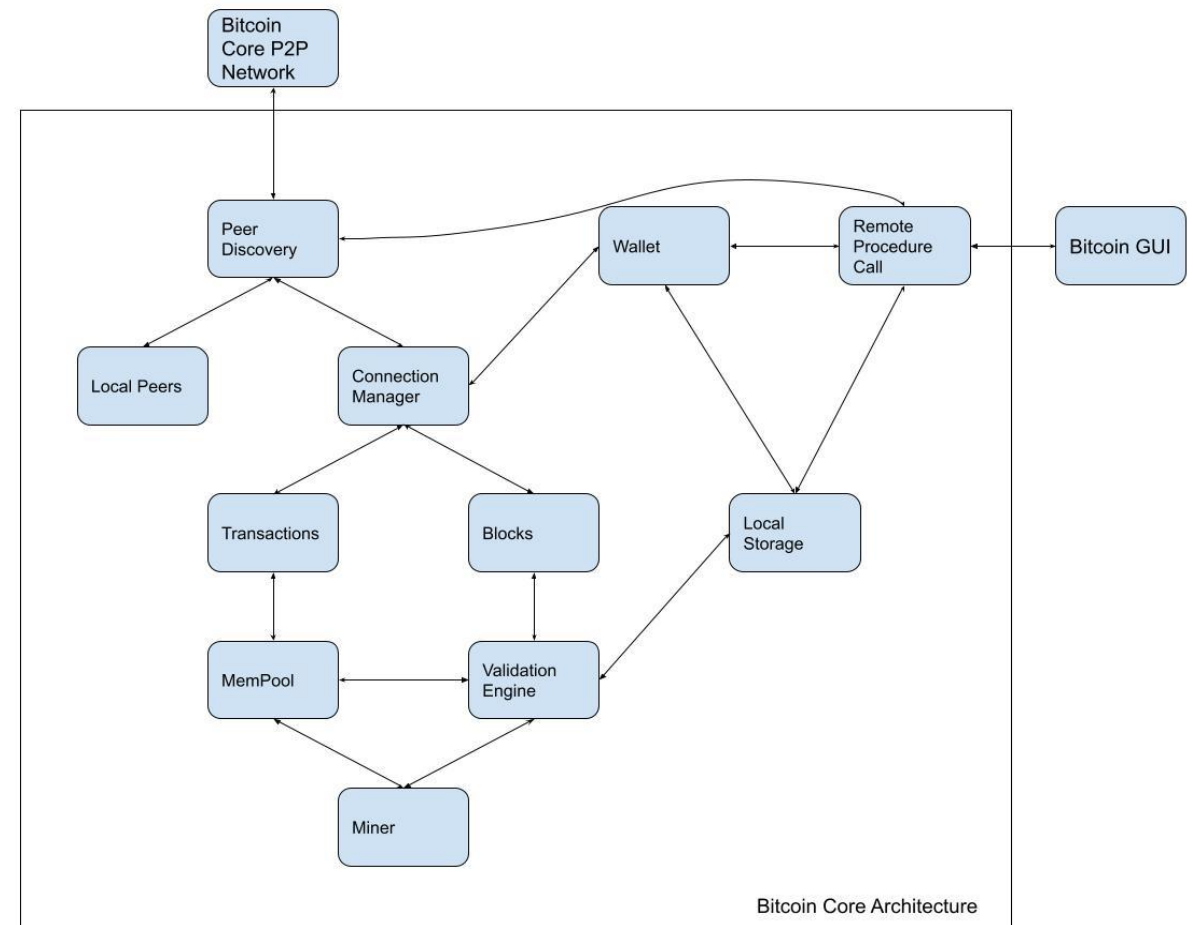
Wallet Reflexion Analysis:

- Similarities:
 - Connection-Manager
 - Crypto-Library
 - Local-Storage
- Discrepancies:
 - Validation-Engine
 - Dependencies on Wallet Subsystem

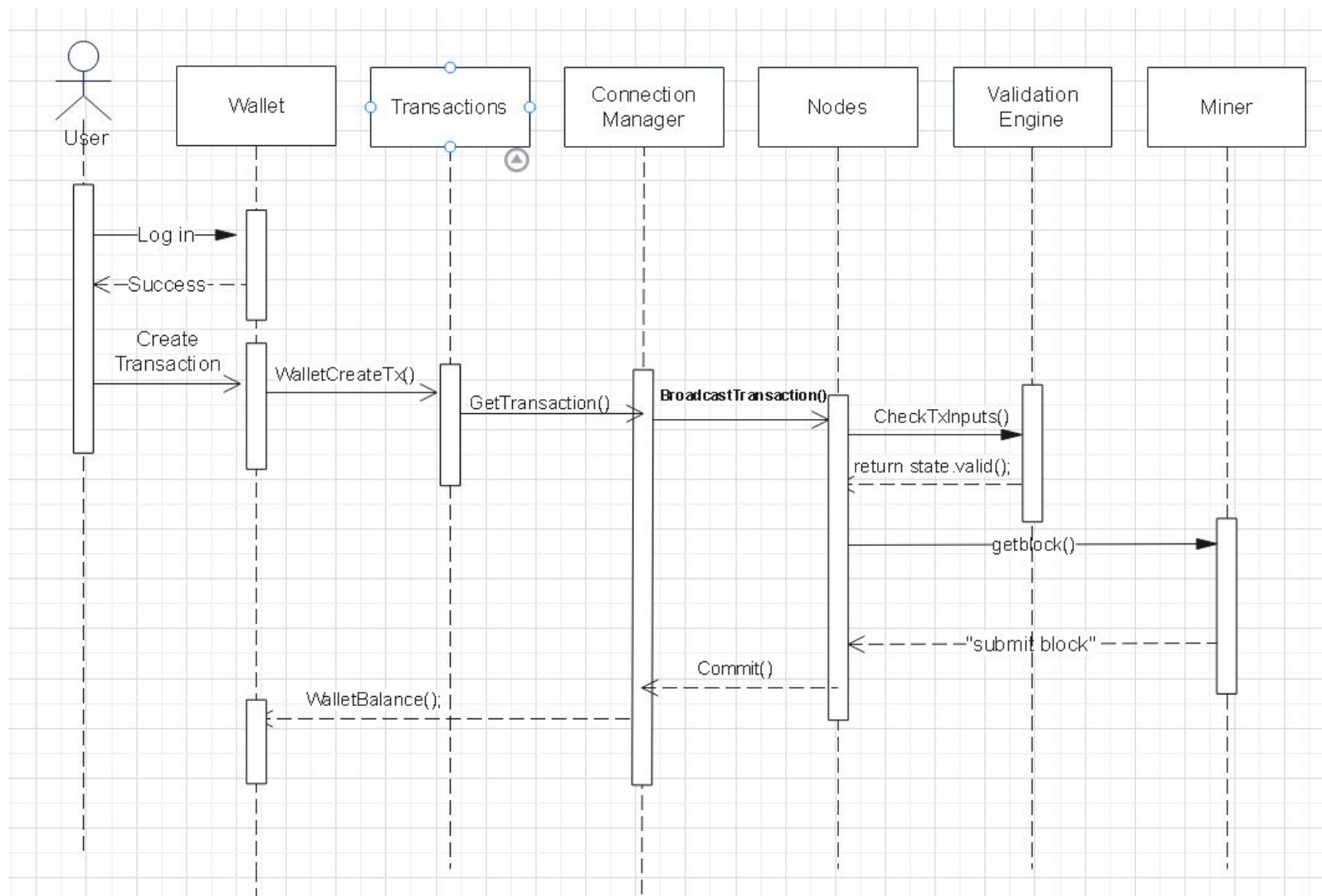


High Level Reflexion Analysis:

- Dependencies:
 - Miner/Mempool/Connection Manager
 - Validation-Engine and Miner
- Discrepancies:
 - Transactions and RPC Subsystem
 - Wallet Subsystem and Validation-Engine



Sequence Diagram



Team issues and effects of concurrency:

- Multi-Threaded architecture
 - Race Condition, Synchronization Issues
- Lack of Documentation
- Finicky software




Fluency

← → ↻

Google

Definitions from [Oxford Languages](#) · [Learn more](#)

 **der·i·va·tion**
noun

1. the obtaining or developing of something from a source or origin.
"the **derivation** of scientific laws **from** observation"

Similar: [deriving](#) [induction](#) [deduction](#) [deducing](#) [inferring](#) [inference](#) ▼

2. **LINGUISTICS**
in generative grammar, the set of stages that link the abstract underlying structure of an expression to its surface form

Derivation Process and Lessons Learned

- Complex system
- Trial and error



Conclusion:

- Peer to Peer Architecture Style
- The reflexion analysis of the wallet subsystem
- The reflexion analysis of our high-level architecture
- A breakdown of the sequence diagram