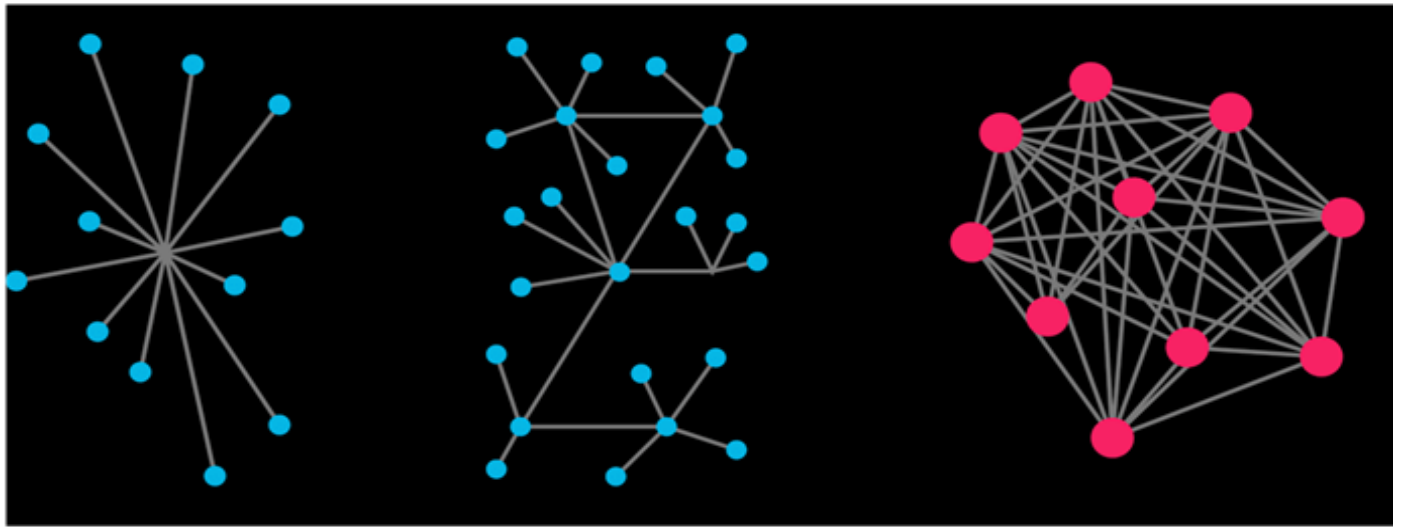
AURA TECHNOLOGY

AURA BLOCKCHAIN OVERVIEW

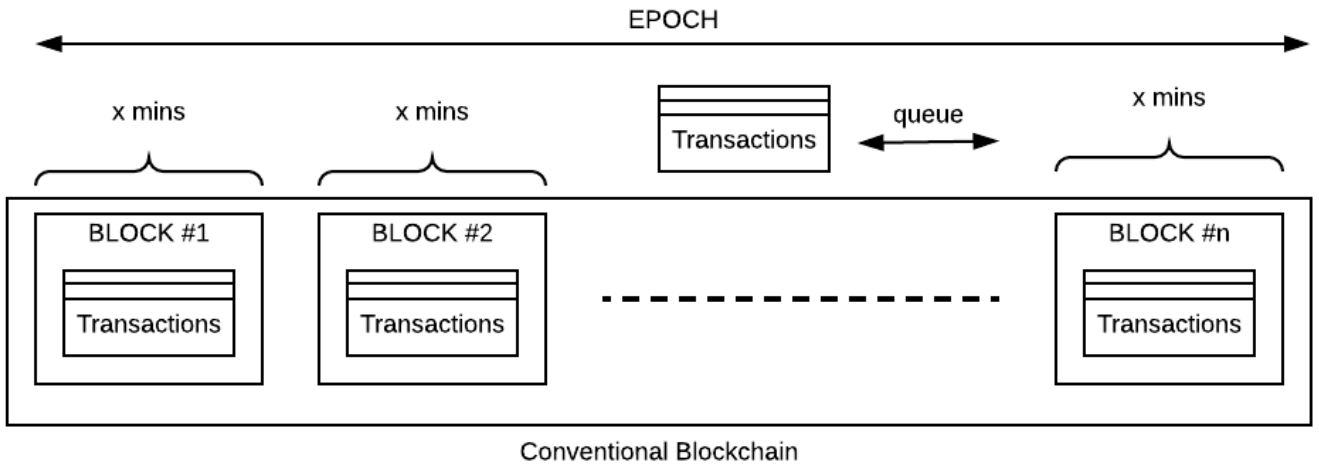
Centralized
Centralization is the most common form of current network available.



Decentralized sub-node
Decentralized sub-node groupings is the basis of first and second generations of blockchain technology. It is much slower in processing and inadequate for day to day transactions.

Fully Distributed Peer-to-Peer (AURA)
For fully distributed blockchain technology, nodes work together collectively to store and process data swiftly. The interdependency creates the trust-free environment where the fundamentals of blockchain technology is based on.

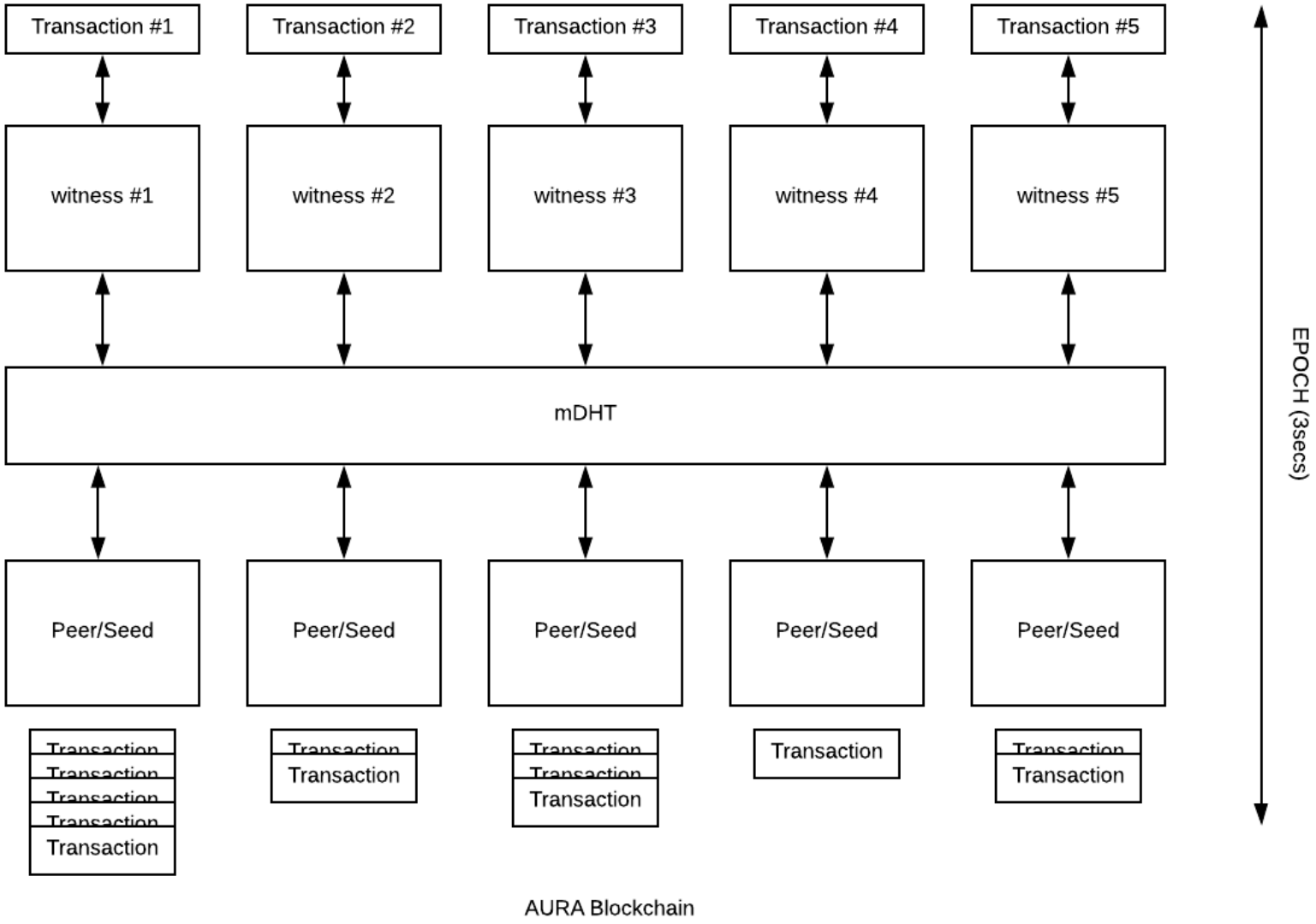
EXISTING BLOCKCHAIN PROCESS



Conventional Blockchain

Sequential block processing

1. Only 1 Block created at 1 time. The number of transactions that can be written to a block is limited.
2. When there are too many transactions in Queue, The transactions that needs to be completed need to pay more to SKIP the QUEUE. Therefor creating higher COST
3. POW, is way too energy in-efficient way to determine who gets to write to a block.
4. Unfair advantage to those that can solve the POW algorithms faster. Creates unequality.
5. Any group of person or person who has 51% or above computing power in the ecosystem will eventually take over the system. It's PAY TO WIN.



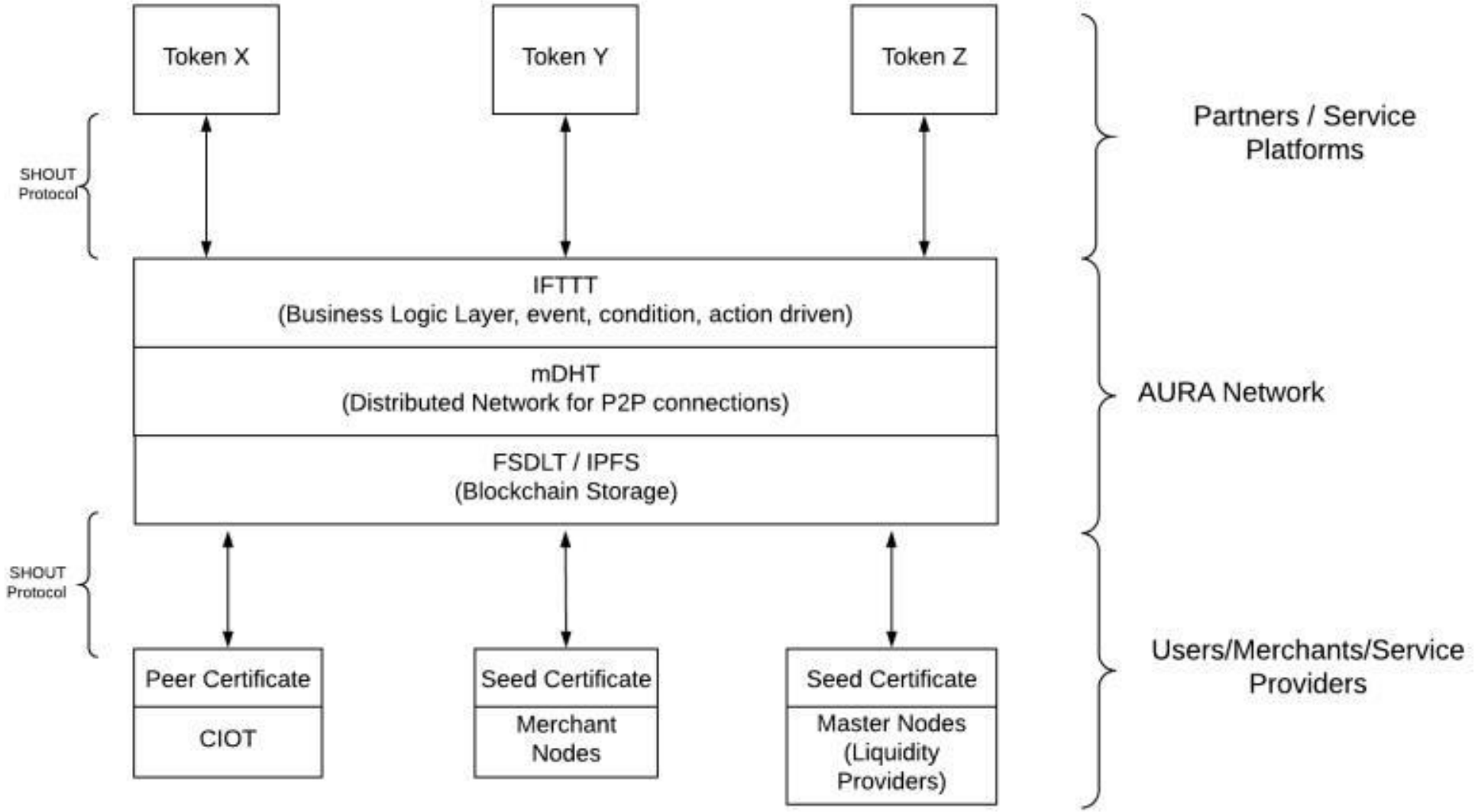
AURA Blockchain

Parallel block processing

1. All on-chain transactional blocks are written to the network in parallel in real-time
2. There is NO QUEUE. When there is too much transactions, the trade will be cancelled and it has to be done again.
3. POR, regulates the integrity of each peer/seed and ensures everyone gets an equal chance to earn from the transactions as a reward.

AURA PROCESS

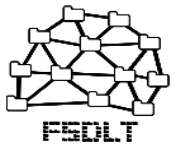
AURA ARCHITECTURE OVERVIEW



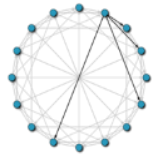
AURA TECHNOLOGY OVERVIEW

The 4 core technology layers:

Latest ***InterPlanetary File System*** (IPFS) implemented. It is a peer-to-peer distributed file storage system that provides secured and efficient communication.



File-System based Distributed Ledger Technology (FSDLT) distributed ledger that supports multi-transactional processing.



System runs over Kademilia ***mainline Distributed Hash Table*** (mDHT) network, proven stable and suitable for distributed peer-to-peer network.

Innovative ***Simple Heuristic Object UDP Transfer*** protocol (SHOUT). It is an effective and efficient communication language for anyone who wants to transact in our network.

AURA TECHNOLOGY OVERVIEW

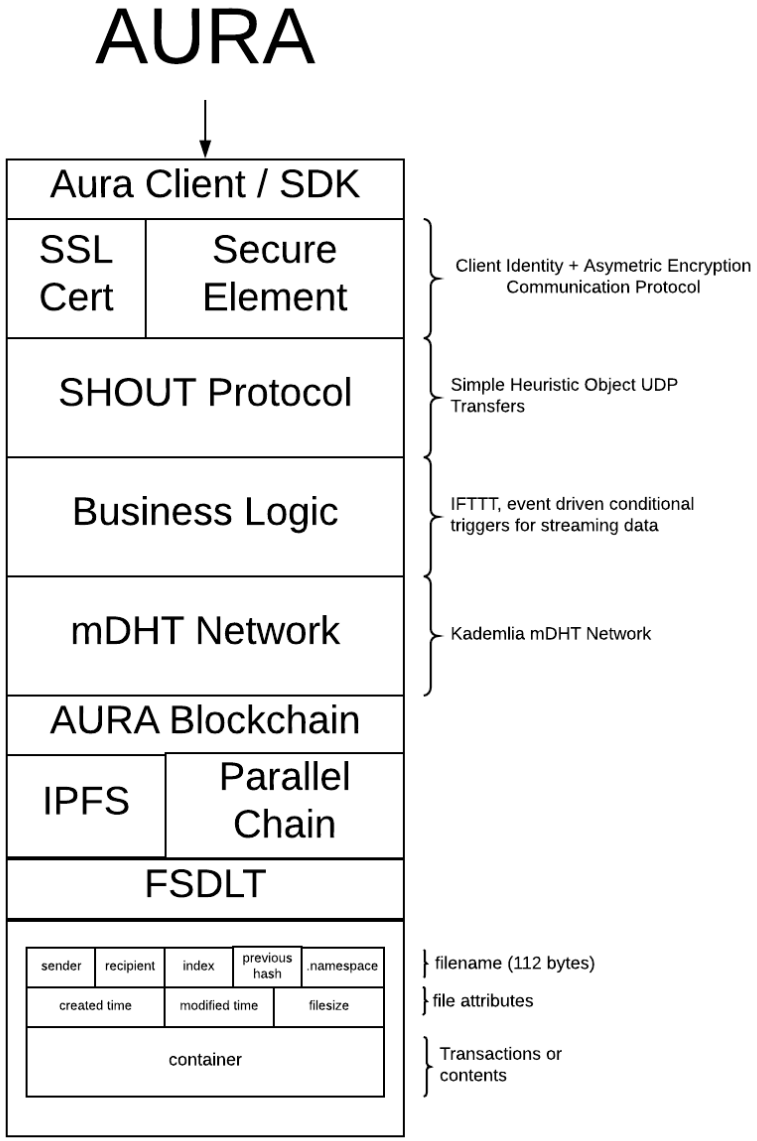
- Smart contract that separates business logic from underlying digital asset, enabling flexibility in business marketing campaigns.
- Security certificates for mobile phone, PC system and IOT Wifi device, which assures mutual authentication.
- Proven mDHT network for ease of adoption.
- Parallel chain processing for effective block management.
- File-based content catering for flexible delivery.
- Proof of Reputation algorithm for a fair and equitable fees reward system.
- Everyone can now participate in the blockchain economy easily, earn fees quickly and transact securely.
- Business can build TGE projects quickly to service their customers with minimum programming and maximum flexibility.

AURA ARCHITECTURE BLOCK DIAGRAM

AURA blockchain consist of an array of technological layers and protocols. It uses distributed storage and the key innovations are the SHOUT protocol and the FSDLT layer. Each FSDLT block is structured as a file which contains all the necessary components such as the filenames and attributes. Each file and the content within has a unique fingerprint called the cryptographic hash which ensures no duplication across the network and ensures immutability.

The block is stored using IPFS on network nodes. Parallel chaining, FSDLT allows multiple transactions to be processed from a single node. Each node only stores the transactions it has participated in. The SHOUT protocol distributes the transaction information through the mDHT network. It also helps other nodes locate the necessary information required to complete transactions.

Each transaction needs to pass through a customizable business logic layer similar to a smart contract. Every transaction can be found by human readable file names that use a naming system called IPNS (InterPlanetary Name Service), part of the IPFS framework.



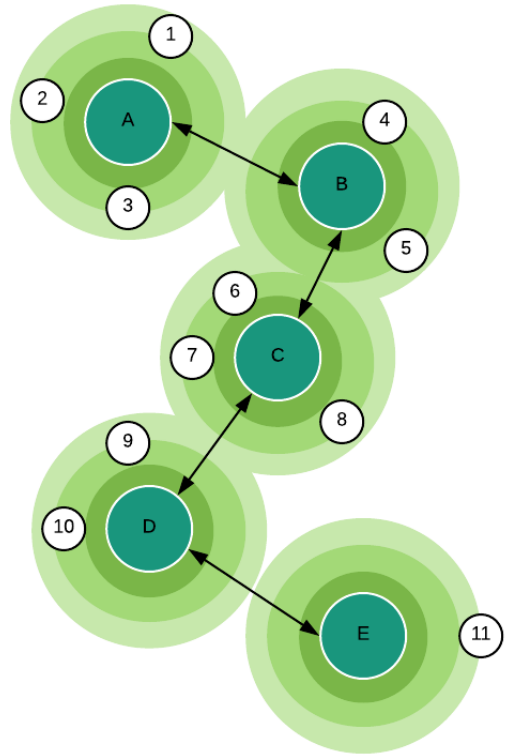
PROOF OF REPUTATION (POR)

- Equitable distribution of Fees earned by witnesses, with the aim of active participation in the community.
- Reputation is ranked by three main considerations –

1. **Response time**; network efficiency in the vicinity
2. **Social influence**; the number of friends and nodes connected
3. **Transaction stakes**; the number of successful transactions made

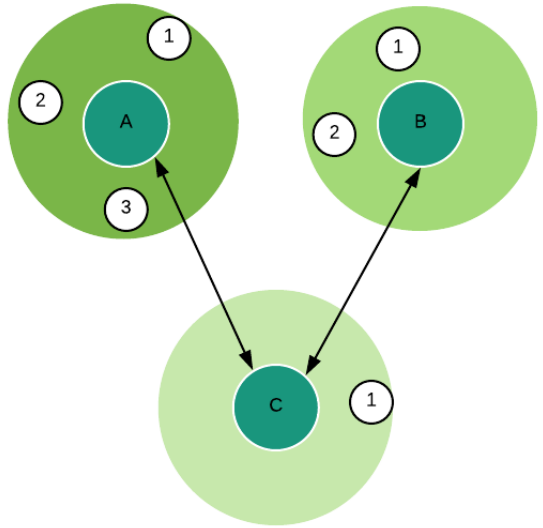
POR SCORING CRITERIA

Reputation Score Criteria #1
Response Times



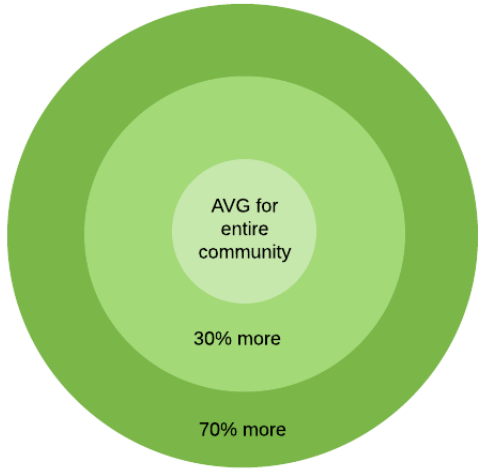
	The faster the more points		
merchants	+10	+5	+1

Reputation Score Criteria #2
Influence



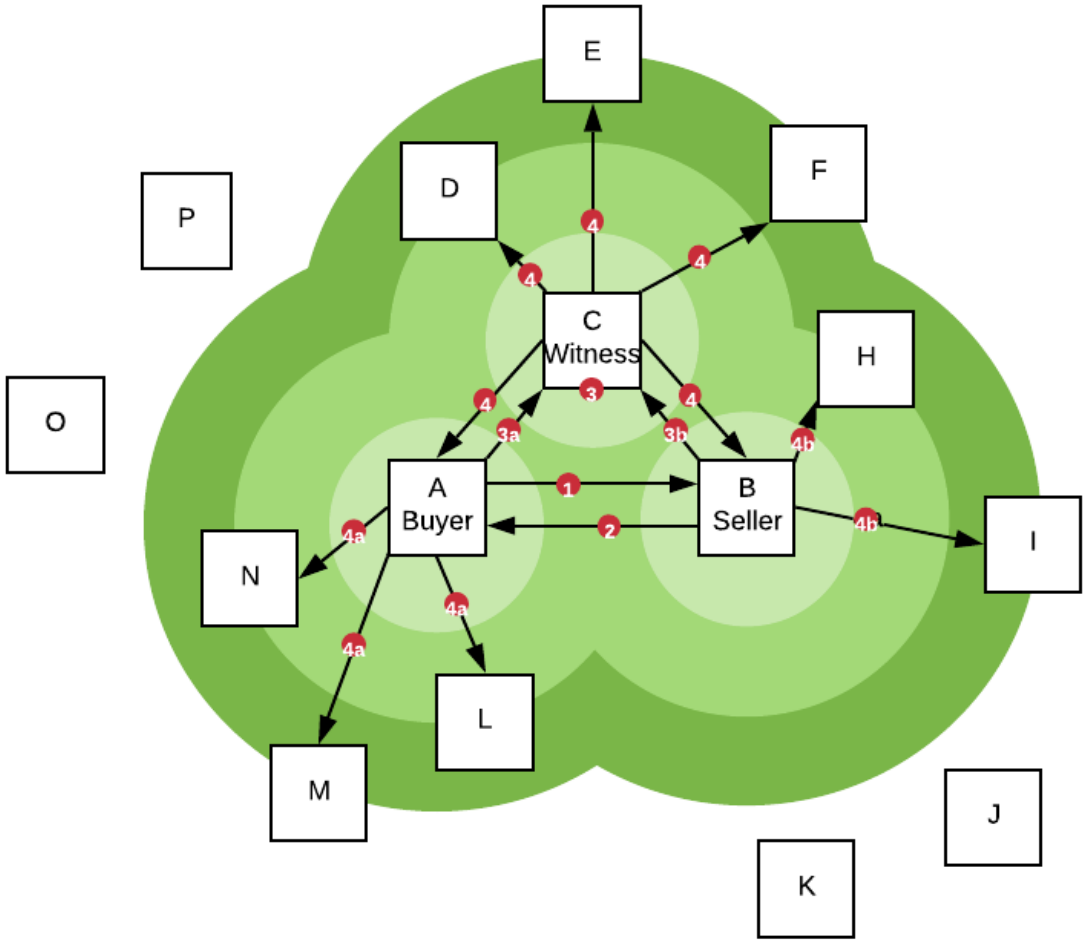
	the more nodes connected the more points		
merchants	+10	+5	+1

Reputation Score Criteria #3
Stake



	The more transacted the more points		
Node	+10	+5	+1

TRANSACTION OVERVIEW



1. (A) Buyer initiate a transaction request to (B) Seller

2. (B) Seller request (A) Buyer to deposit Transaction to (C) Witness

3. (C) Requests info on (A) to see if (A) has enough funds from the network.

3a. (A) Buyer deposits x to (C) Witness.

3b. (B) Seller deposits (0) to VAULT and SIGNS.

4. (C) awaits for the transaction to complete between the (B) Seller and (A) Buyer. IF Either (A) or (B) closes the VAULT, depends on who closes the vault the party will pay for the witness fee. the transaction is then SHOUT'ed to the nearby PEERS. (D) + (E) + (F)

4a. Updated Transaction between (A) and (B) and (C) is SHOUT'ed to nearby PEERS. (L) + (M) + (N)

4b. Updated Transaction between (A) and (B) and (C) is SHOUT'ed to nearby PEERS. (H) + (I)