Blockchain Voting System (DAOs)

Devansh Gandhi (11916) | Sanchit Banati (11939)

Mentored By: Ms. Shobha Rai

Cluster Innovation Centre
University of Delhi

ABSTRACT

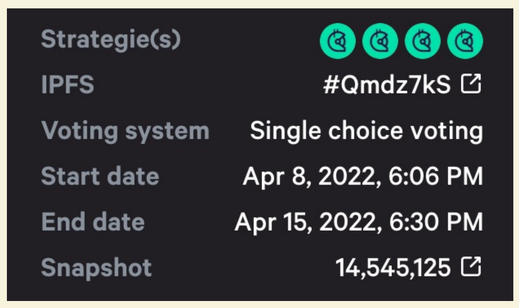
With the adoption of internet and internet-enabled devices now almost 54% of India is equipped with a smart device in their hand, even the folks who don't have a government identity, which can enable each and every one of them to participate in direct democracy & if the decision to be made doesn't lie in particular user expertise with the help of crypto-economics delegation of the votes can be done enabling a better form of decision making, making it a more transparent & cost-effective way of decision making.

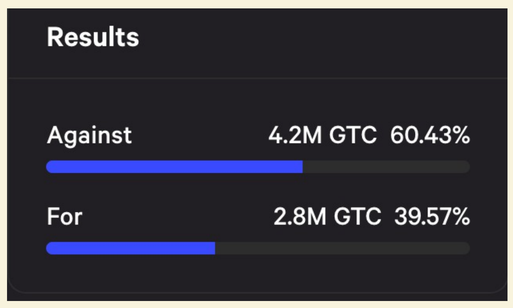
INTRODUCTION

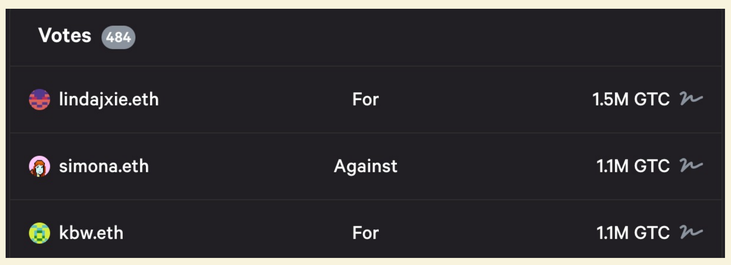
The current state of decision making is following a representative democracy which was built in a time when information was a luxury but now in the current age 'information' is the most common commodity making the current decision making being lagged and not following with the current technological advancement. But, with the help of blockchain primitives, direct democracy with more specific decision-making can be enabled by experts in their respective fields through the form of delegation. Just like each citizen cast their vote in which Aadhar card is the unique ID, here the indirect democracy wallet address replaces that. By using IPFS as a storage solution the whole process is more transparent when compared to the current one and it enables a more cost-effective way of casting votes and saving a lot of time and resources.

TECHNOLOGICAL MODELS USED

- Smart Contracts for Casting Votes.
- IPFS as a storage solution.
- LIBP2P making it more transparent.
- Crypto Wallet acting as a Unique Identifier.
- Arweave as the backup Storage Solution.
- Quadratic voting.
- Token Engineering and Game theory for Incentive Alignment.





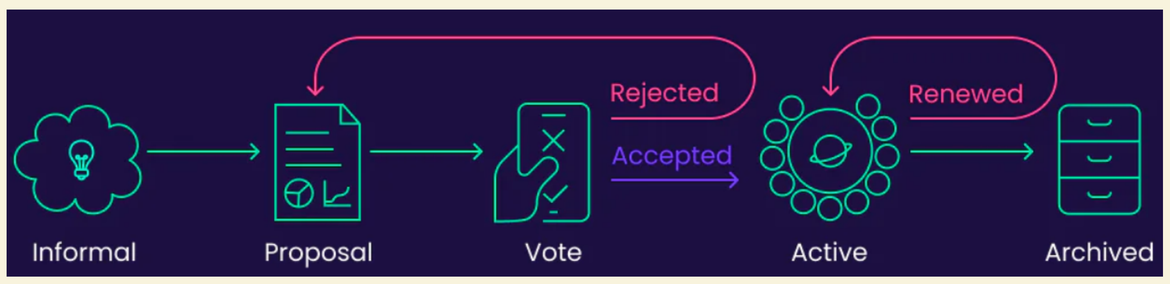


RESULTS AND DISCUSSION

With the implementation of various voting mechanisms (single choice voting, quadratic voting and delegated voting system) one can have higher participation ratio in the process of decision making if correct incentives are aligned for each participating stake holders in the process and by using protocols infrastructure we are adding compatibility to the whole eco system and did not have to worry about every moving piece rather aggregating all the resources in place to build and provide a much better mechanism which will help in the coordination problem which we are facing in this age.

CONCLUSION

Each user will be having a unique ID though the Metamask and they can participate in the process of direct democracy by casting their vote on a particular decision. With the help of Blockchain primitives, privacy of a user is maintained, saving a lot of infrastructure cost in the process of decision making and with the help of delegation, decision making can be handled by experts in their respective fields.



REFERENCES

- Snapshot Labs
- Gitcoin: Regenerative Economics
- Token Engineering Commons
- IPFS Storage Solution
- ColalentHQ

Devansh Gandhi (Email: devanshgandhi555@gmail.com) | Sanchit Banati (Email: sanchitbanati33@gmail.com)