The Governance Technology for Blockchain Systems: A Survey

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Problems & Work

- Problems of Blockchain Governance
  - Lack of systematic literature review on blockchain governance
- Work: We have conducted a systematic review of blockchain governance literature, which provides significant guidance for in-depth research on blockchain governance.

Main Contributions

- Contributions:
  - We summarize the four voting methods of existing on-chain governance and explain the process of each voting method in detail.
  - We analyze the governance process of Bitcoin and Ethereum. Then, we give the attributes that on-chain governance should meet and analyze three popular on-chain governance blockchain platforms.

Table 3 The comparison for four governance voting methods

Voting methods	Advantages	Disadvantages	Current use
Proxy voting	Professional, Flexible High participation	Accountability, Centralized	Tezos, Difinity [34], Bitshares
Quartic voting	Professional, Reliable High participation	Centralized, Costly	Dursun et al. [35] Gitcoin [36], Kickflow [37]
Cross-chain voting	High development speed High participation, Safe	Complex, Costly	MULTAV [38]
Token-lock voting	Safe, Efficient	Deflation	Ping Pong [39], Decred

Table 4 The comparison about three governance methods

Governance methods	On-chain governance	Off-chain governance	Hybrid governance
Method	On-chain voting	Off-chain meeting	Hybrid
Participants	Token holders	Core developers, Experts	Experts (off-chain) Token holders (on-chain)
Advantages	Fair Transparent	Professional Efficient, Flexibility	Combining both
Disadvantages	Low participation Low efficiency, Variability	High centralization Untransparent	Immaturity
Main goal	Modify consensus mechanism and some governance detail	Formulate overall direction of blockchain development	Overall all governance issues of blockchain