

Ethereum Governance Mechanism

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What to govern?

Protocol:

- emergency fixes

- protocol upgrades (PoS, Sharding, EVM, Opcode gas pricing, ...)

Dapps:

- infrastructure dapps: ENS, Swarm Smart Contracts, ...

- regular dapps, can build in governance themself:

 - central authority

 - multisig / consortium

Parties involved

Party	on-chain verification / measurement
Miners	block.coinbase
Stakers / Ether owners	address.balance
Users	msg.gas * tx.gasPrice
Speculators/Traders (daily price discovery)	-
Client developers	identifiable through special key pair
Dapp developers	msg.sender of contract creation * usage (tx fees paid / ether balance)
Foundation	foundation multisig
Researchers	-
Regulators	-

Ethereum governance today

Dapps: Do-it-yourself

Protocol:

on-chain governance:

- Miners decide BlockGasLimit

- Difficulty bomb forces users to update

off-chain:

- EIP - Thought leaders / Foundation / Client Developers suggest and implement

- User / Miners / Speculators support or reject

Can we do better?

Can we:

protect minority rights

avoid hard forks for simple protocol updates (gas prices of opcodes)

offer more certainty (special request from enterprise users)

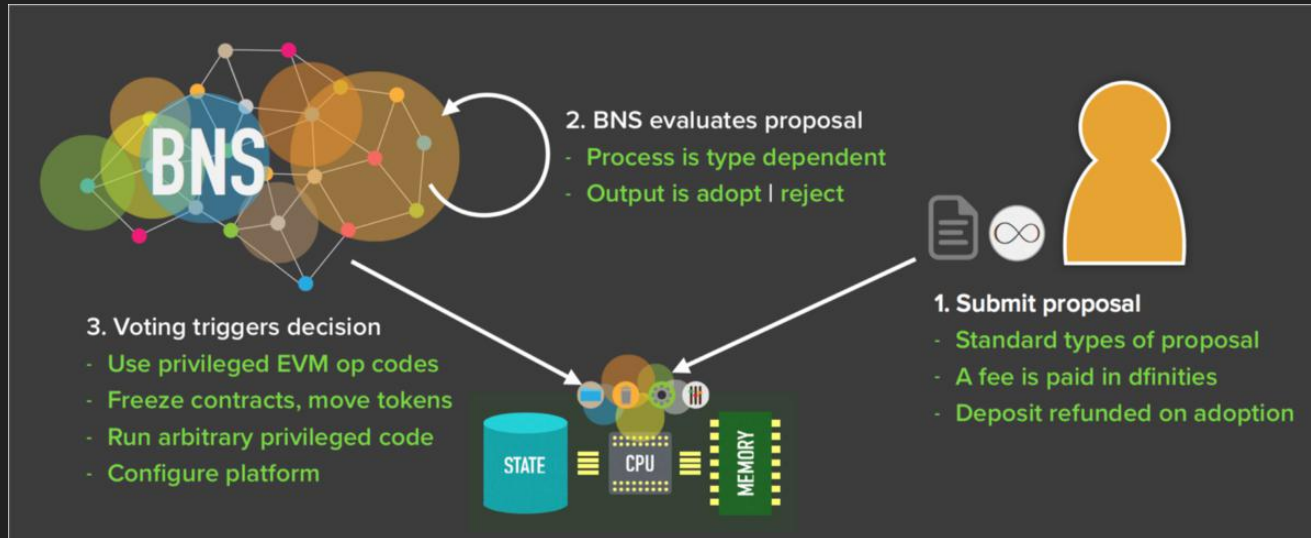
faster decision processes

include all relevant parties

Current Suggestions

Blockchain Nervous System - Dominic Williams, Dfinity

<https://medium.com/dfinity-network-blog/the-dfinity-blockchain-nervous-system-a5dd1783288e#.n2yrxfa1b>



Yellow Paper Committee - Gavin Wood

“The Yellow Paper Committee is a minimally-funded, constitutionally-driven DAO charged with only one task: providing an up to date hash of the git branch containing the latest canonical source code for the non-implementation specific specification of the Ethereum protocol. It works in concert with the EIP process and acts as a final decision-making body.” <https://github.com/gavofyork/curly-engine>

EIP 138 - Bomb 2.0 - Vitalik Buterin

<https://github.com/ethereum/EIPs/issues/138>

Suggestion for discussion only

Vote with Ether on a hard fork and make old chain unusable in the process.

“The purpose of this is to substitute the ice age with a more general "governance gadget" for hard forks. The intention is that people will start sending ether into the contract with `depositYes` when a hard fork is proposed and they want to approve; once enough people approve, the blockchain turns on a "self-destruct timer" that essentially forces a hard fork to take place.”

EIP 182 - Control Protocol Parameters with on-chain governance

<https://github.com/ethereum/EIPs/issues/182>

Protocol constants (mainly opcode pricing) are read from smart contract

Governed by Miners and/or Stakers

Conclusion

Do we need better on-chain governance?

Chicken-egg problem:

Is our current government model good enough in order to decide on an upgrade of the governance mechanism?

Opinion: We do have the tool for on-chain-governance (smart contracts) - Let's use them!