Delegated Byzantine Fault Tolerance (dBFT)

Return to Consensus Mechanism

Delegated Byzantine Fault Tolerance (dBFT) is a sophisticated algorithm meant to facilitate consensus on a blockchain. Although it is not in common use as of yet, it represents an alternative to simpler proof of stake, proof of importance, and proof of work methods.
https://www.techopedia.com/definition/33598/delegated-byzantine-fault-tolerance-dbft

Delegated Byzantine Fault Tolerance (dBFT) consensus was introduced by NEO, often called the *"Ethereum of China"*. This Chinese blockchain plans to achieve the "smart economy" by digitizing assets and providing smart contracts on the blockchain.

According to its creators, the voting system of dBFT allows large-scale participation, in a similar way to the Delegated Proof-of-Stake consensus. This allows the holder of a NEO token to support a specific 'bookkeeper' through a vote. The selected group of bookkeepers then use the Byzantine Fault Tolerance mechanism to reach a consensus and generate more blocks.

One of the strongest points of using the dBFT mechanism is its absolute finality. After final confirmation, a block can not be bifurcated, so the transaction can't be revoked or rolled back. However, this irrevocability is a two-edged sword if and when a bifurcation is needed.

The finality of dBFT is somehow guaranteed because NEO is not a wholly distributed network. Despite NEO's efforts to take this direction, there are currently just seven nodes and a few delegates operating on the blockchain. The majority of these are connected to the NEO council.[1)]

1)
Christina Comben, Coin Rivet, 14 March 2019, Accessed 18 July 2021, https://coinrivet.com/delegated-byzantine-fault-tolerance-dbft-explained/