Alternative consensus 2

Cryptocurrencies have some challenges when it comes to infrastructure, mainly scalability limits that need to make trade offs between throughput and latency. We look at several different ways to mitigate/influence these:

Bitcoin NG (next generation) is one of alternative protocols that is designed to scale. It is a BFT protocol. Bitcoin NG's latency is only limited by propagation delay of the network, while latency is limited by the processing capacity of nodes. This efficiency is achieved by splitting bitcoin's blockchain into two parts: leader election and transaction serialization. The consequence is that there are also 2 types of blocks, Key blocks and microblocks. Key blocks are used to choose a leader, which is random just like in bitcoin, so the security is supposed to stay the same. Microblocks are the ones that contain ledger entries, and these blocks can only be created by the leader.

Another alternative protocol is Blockene, which is a lightweight large scale blockchain that provides good performance for real-world transactions. Lightweight to the point that it can even be used on low-performance mobile devices, it allows a wide-scale adoption, unlike bitcoin where mining became very restrictive practically speaking, basically non-profitable without specialized equipment. To achieve this, changes needed to be made in many performance departments, for example when it comes to storage, blockene only takes a few hundres megabytes of storage for the entire blockchain. Blockene is also assumed to drain less than 3% battery per day for a node (mobile user). Similar to bitcoin NG, blockene splits users into 2 parts, here they are called Politicians and citizens. Citizens are the trusted, normal user nodes, and they have the voting power, i.e., they participate in the consensus protocol. Politicians are untrusted, but they run on servers and only 20% of them need to be honest for the protocol to work. They do most of the heavy work (computationally, hence servers), but the protocol is designed so that it is easy for citizens to detect abnormalities.