Summary Alternative Consensus 2 Alexander Wandrup

Bitcoin-NG is a blockchain protocol like blockchain that serializes transaction, but aims for better latency and bandwidth with no sacrifice in other properties. The protocol works by dividing time into epochs and then have a leader in each epoch in charge of serializing state machine transaction. It have two new blocks. A key block for leader election and micro blocks that contain the ledger entries. Each block has a header that contains, the unique reference of its predecessor. The key blocks are used to choose a leader.
As in bitcoin the hash of a block have to be less than the target to be valid, but unlike bitcoin It will contain a public key that will be used in later micro blocks. Once a node generates a key block it becomes the leader. As a leader, the node is allowed to generate micro blocks at a set rate smaller than a predefined maximum.

Blockene is a blockchain protocol that does not require participants to run powerfull servers but rather allow you to participate as first class citizens in consensus using less powerfull hardware like smart phones. Blockene requires less network data than the usual blockhain. The gossip usually requires tens of Gb of data usage per day but blockene only requires around 60 mb making it suitable for mobile networks with limited data capacity like smartphones usually have. Blockene also only reguires a few hundred MB while blockchains like bitcoin need several hundred GB of storage. Blockene achieves this by using a new system design using a split trust architecture. It works by having two types of nodes. A politician and a citizen. Citizens have voting power and are in a huge mayority being several million, while politicians are a very small minority with only a couple of hundred nodes. It is assumed and required that two thirds of all citizens are not malicious while only 20% of politicians are required to be honest. This is because 80% of politicians need to collude with over 33% of the citizens in order to manipulate the consensus.
The politicians role in the protocol is to do the heavy lifting with jobs like storing the blockchains, while citizen deal with more lightweight tasks like transaction validation and deciding what block to commit to the chain.