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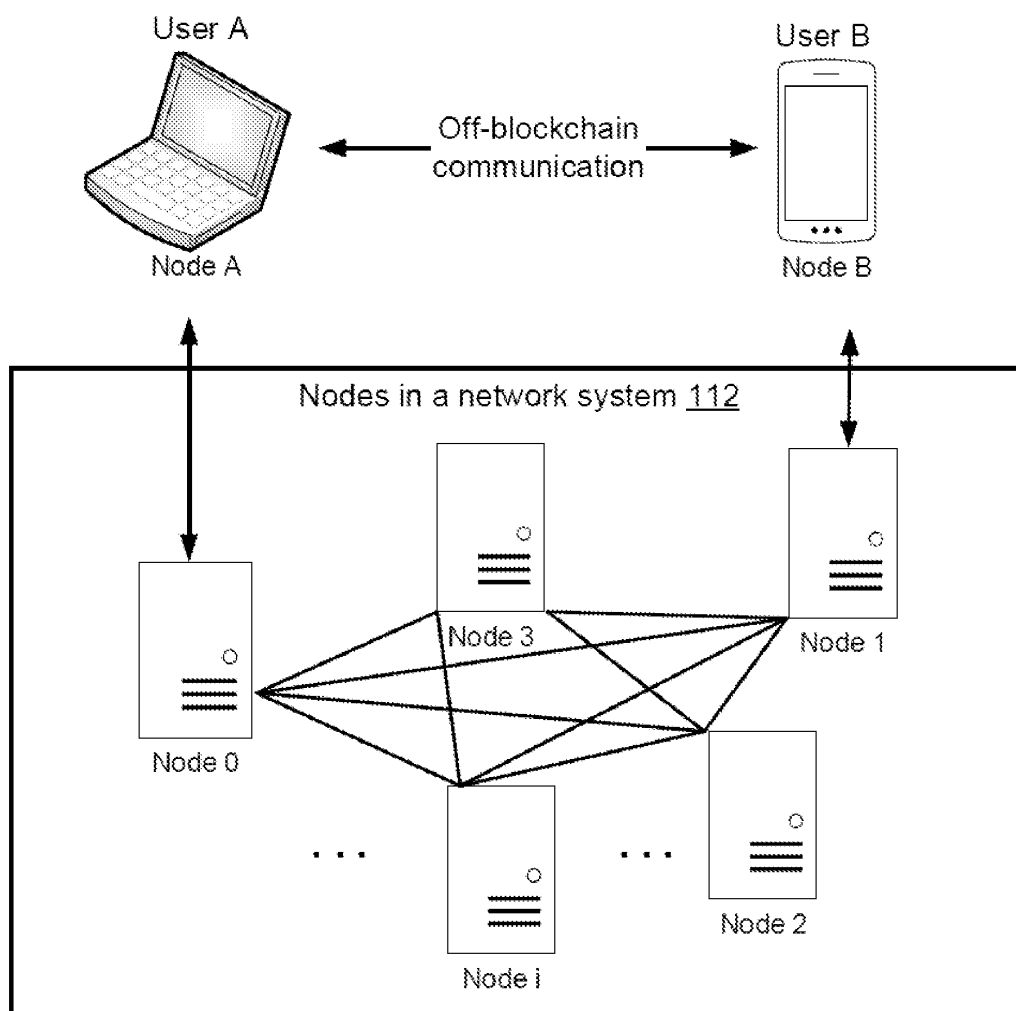


FIG. 1

Normal operation protocol

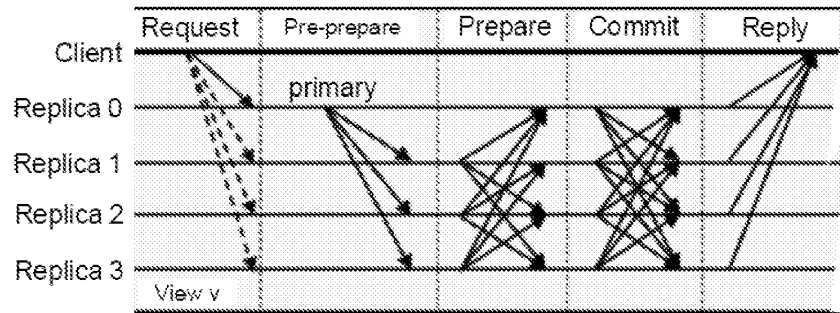


FIG. 2A

Normal operation protocol with one faulty backup node

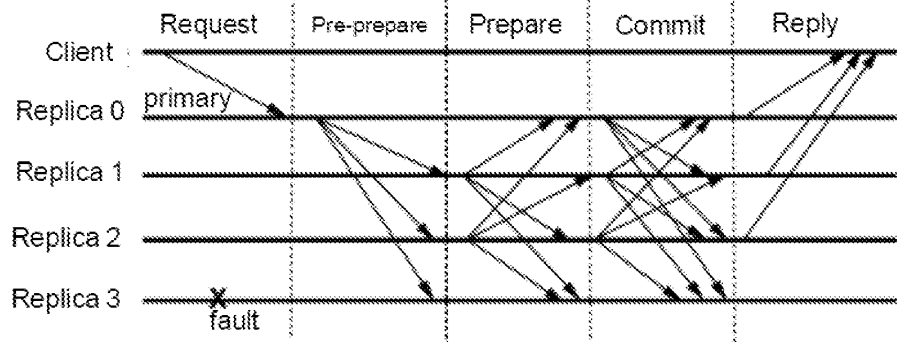


FIG. 2B

Normal operation protocol

View change protocol

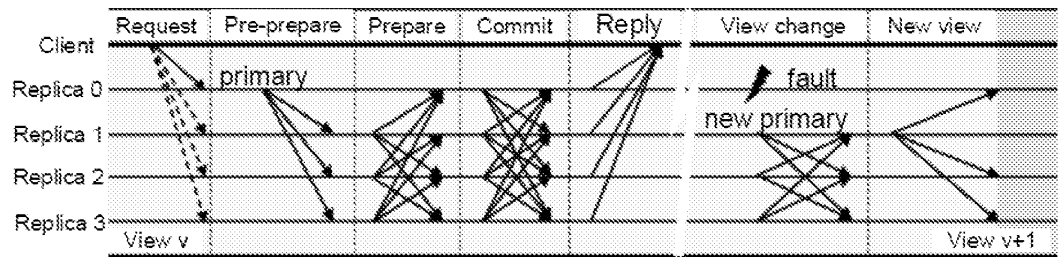


FIG. 2C

Normal operation protocol

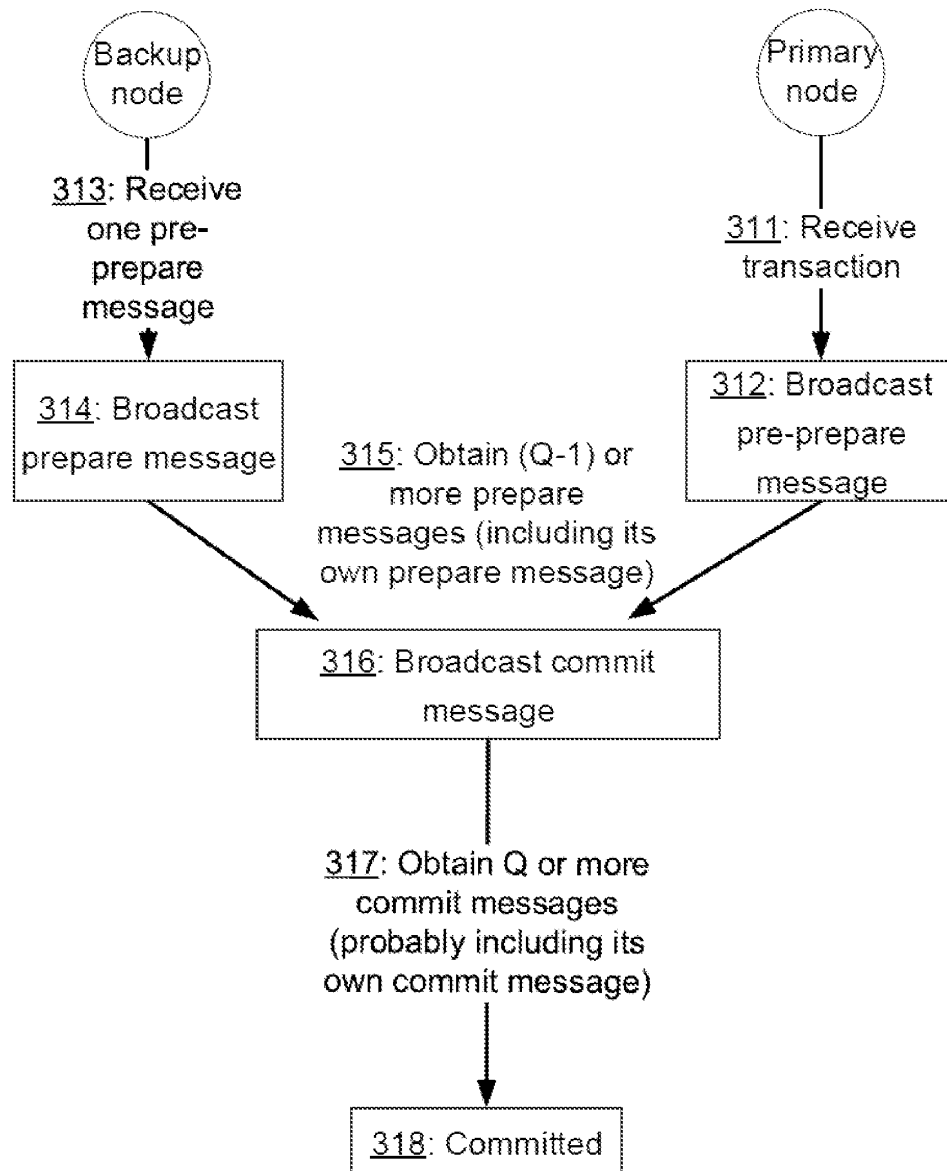


FIG. 3A

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View change protocol

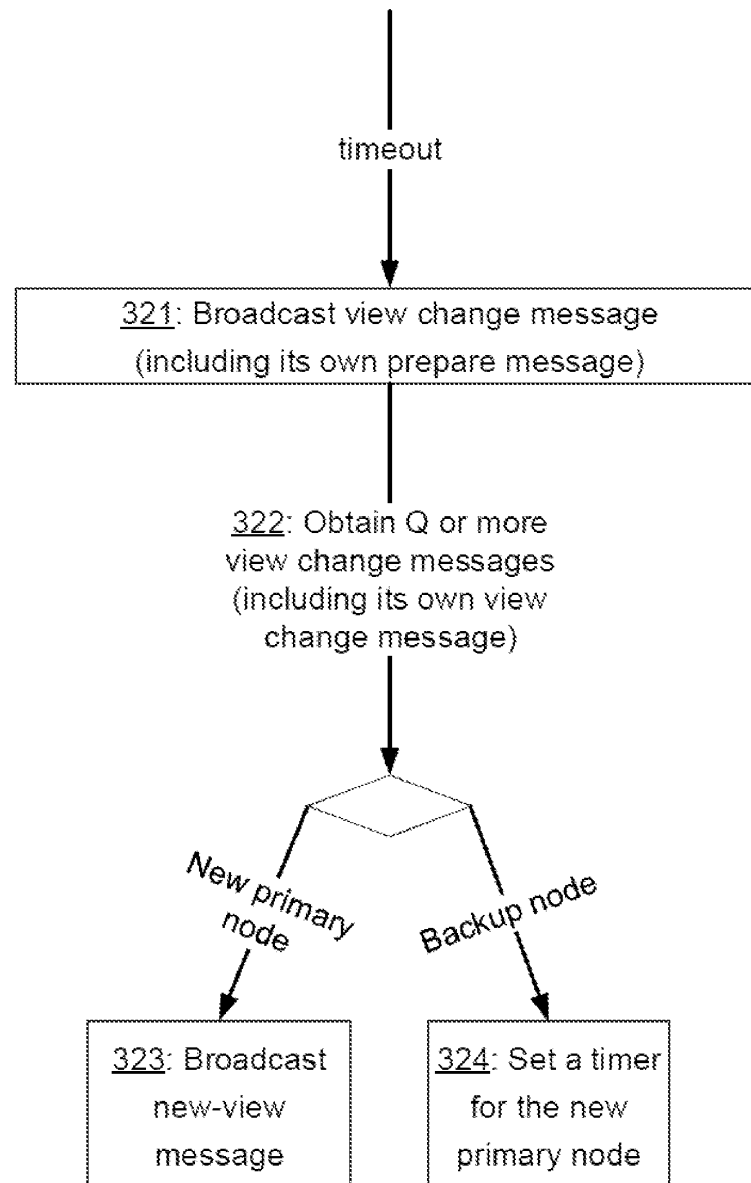


FIG. 3B

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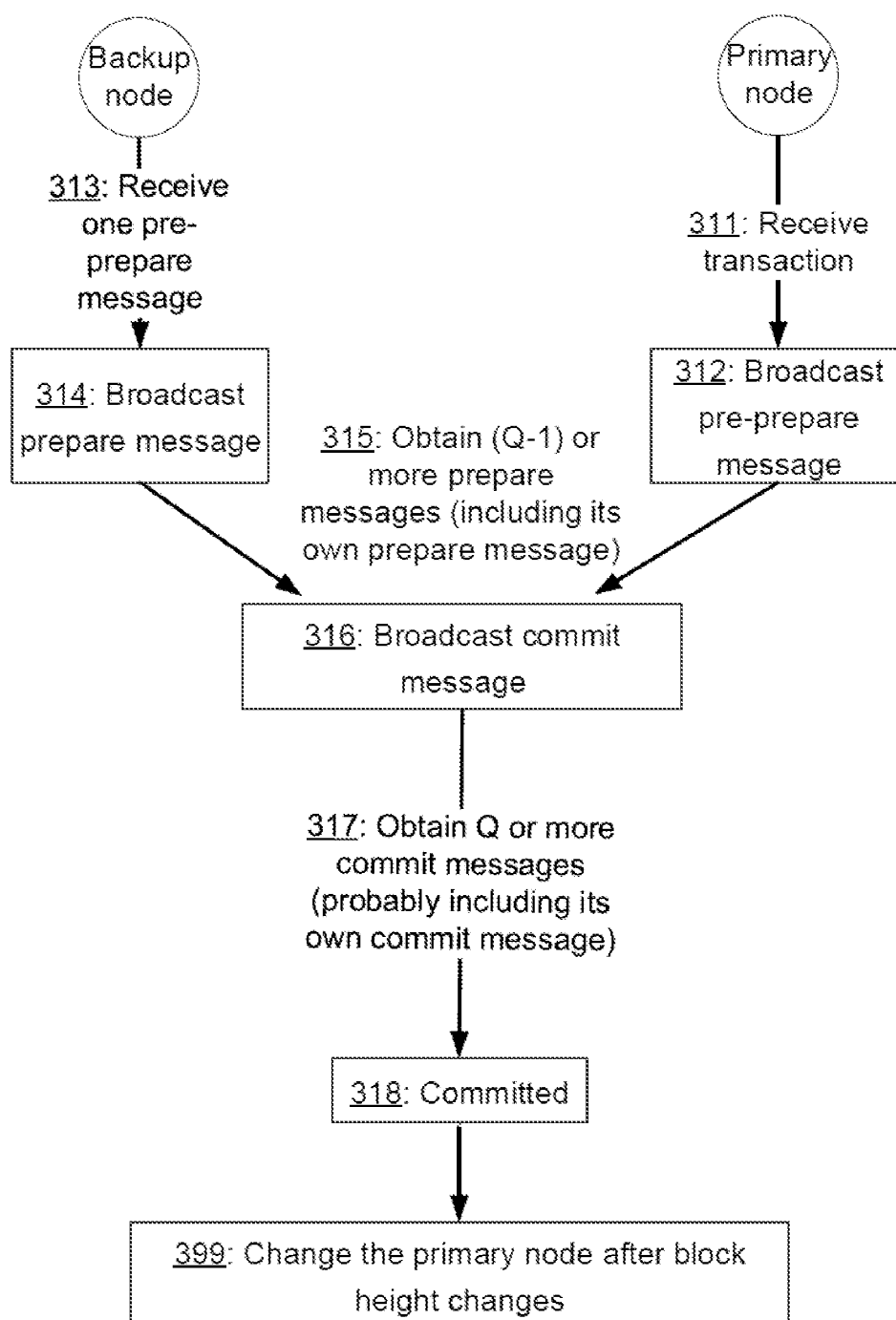


FIG. 4

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A blockchain is maintained by a number (N) of nodes, wherein one of the nodes acts as a primary node and the other (N-1) nodes act as backup nodes, and the method is performed by one of the N nodes

511: detecting a change in a current height H of the blockchain



512: determining the primary node based on a parameter P and the number of nodes N, wherein the parameter P is proportional to the current height H of the blockchain



513: in response to determining that the one of the N nodes is the primary node, executing a PBFT normal operation protocol as the primary node



514: in response to determining that the one of the N nodes is not the primary node, executing the PBFT normal operation protocol as one of the backup nodes



515: repeating the steps 511-514 for one or more rounds of the execution of the PBFT normal operation protocol; and for each of the one or more rounds, changing the primary node based on the parameter P and the number of nodes

FIG. 5

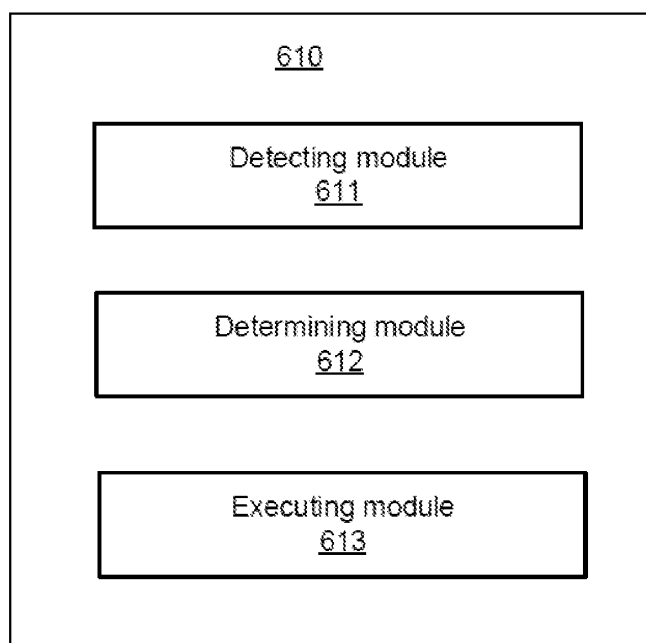


FIG. 6

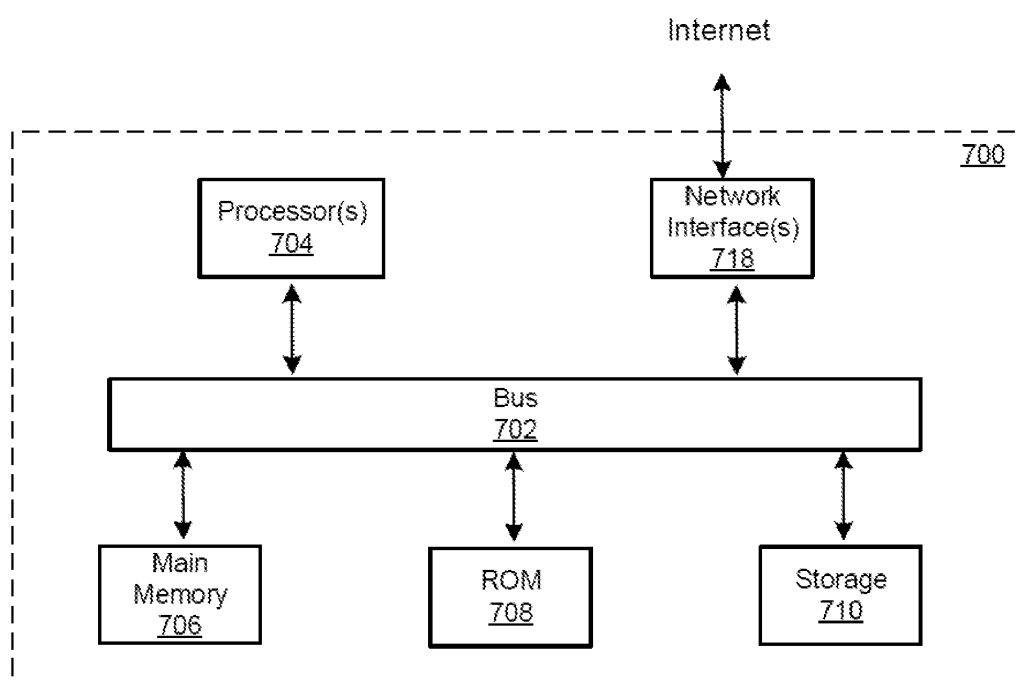


FIG. 7