

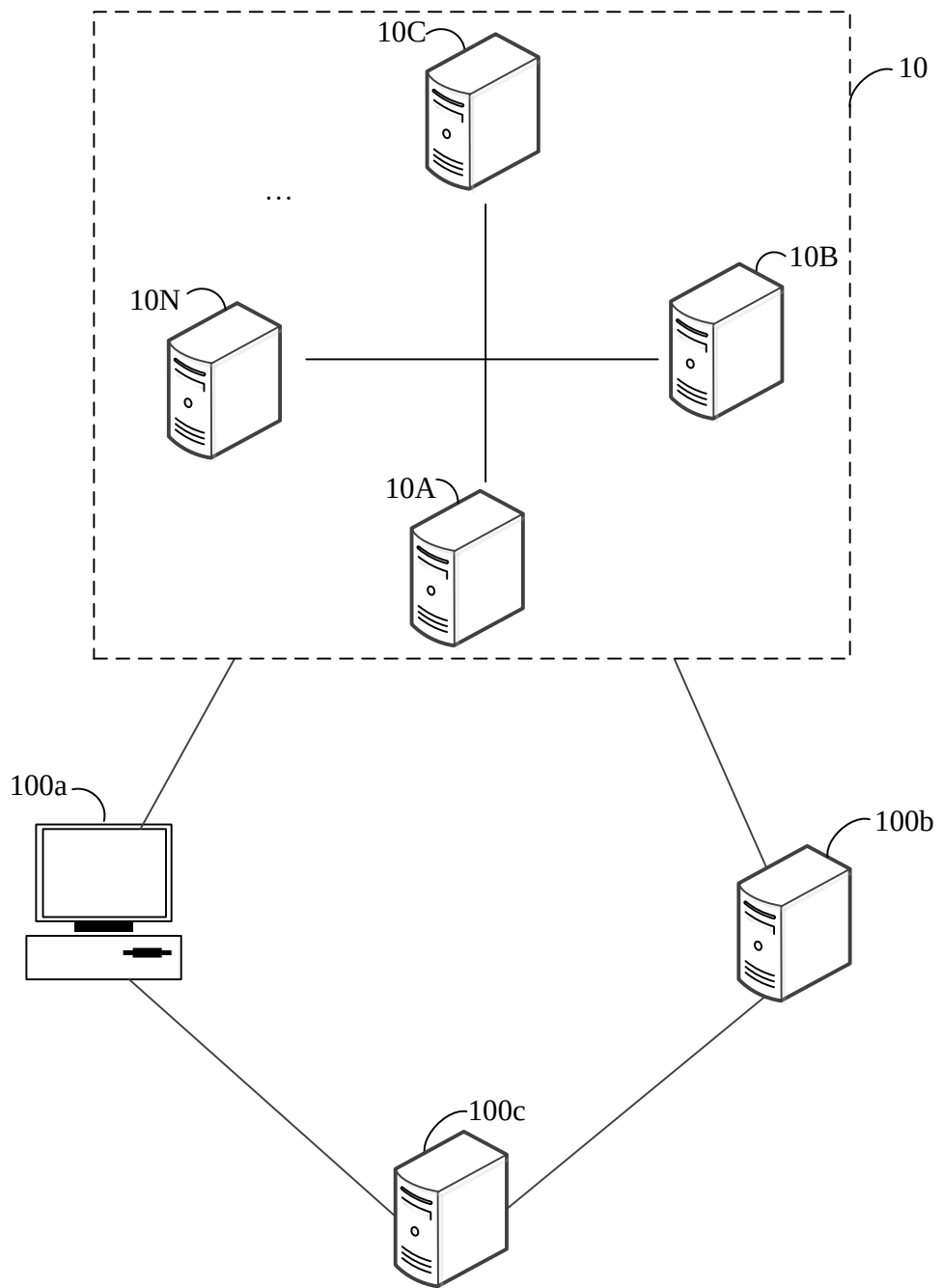


FIG. 1

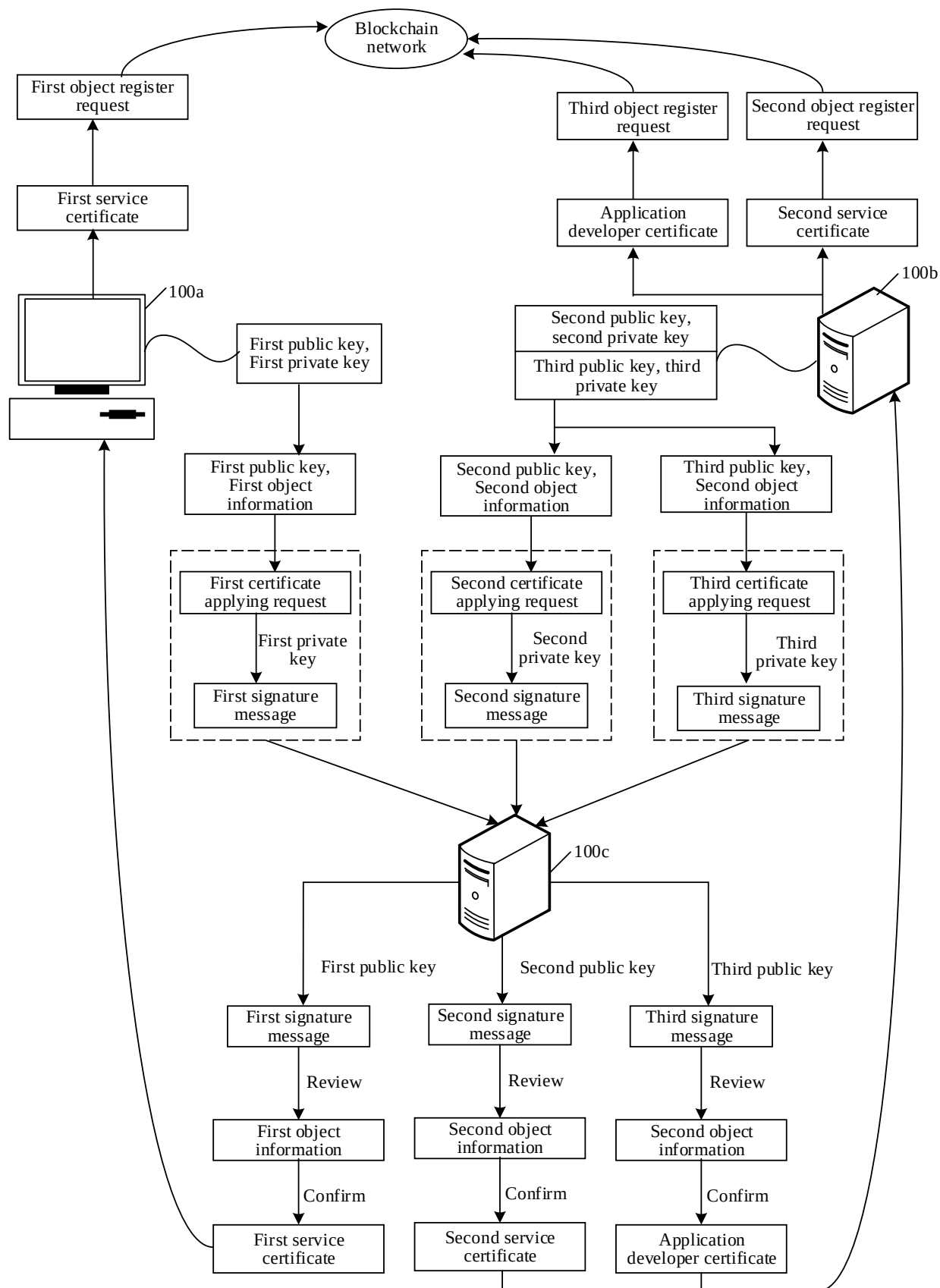


FIG. 2a

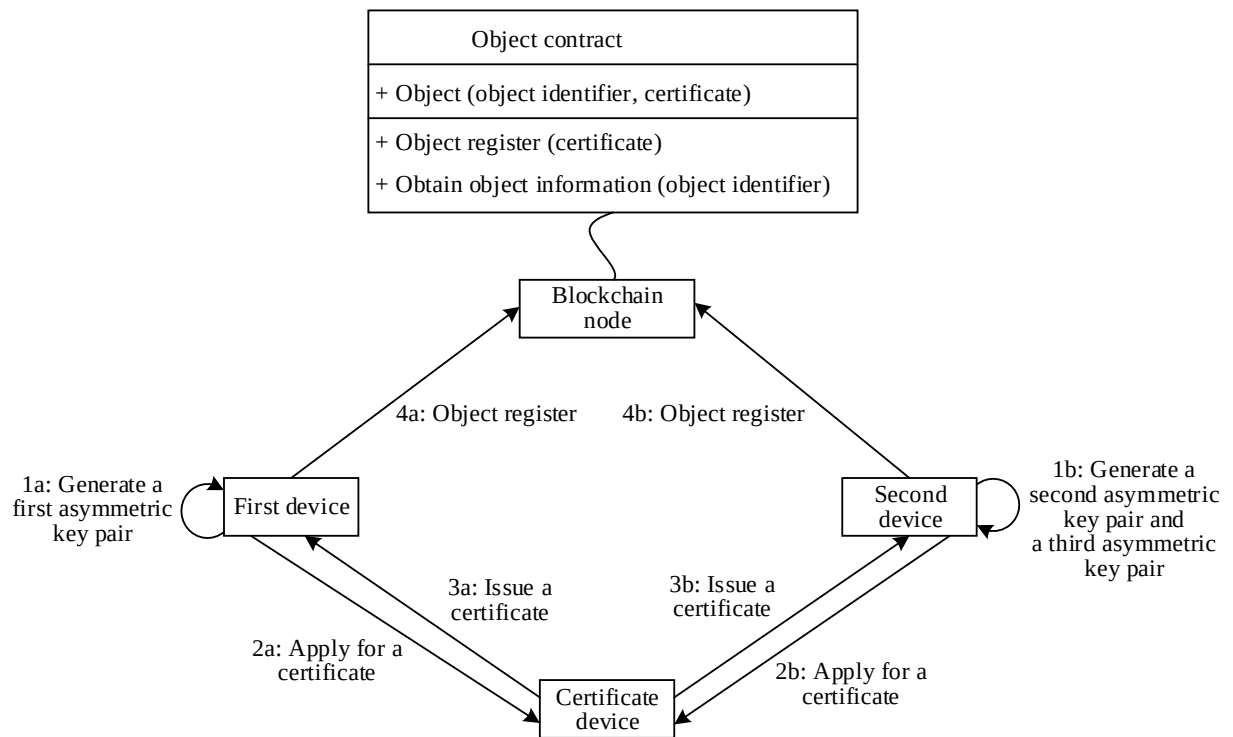


FIG. 2b

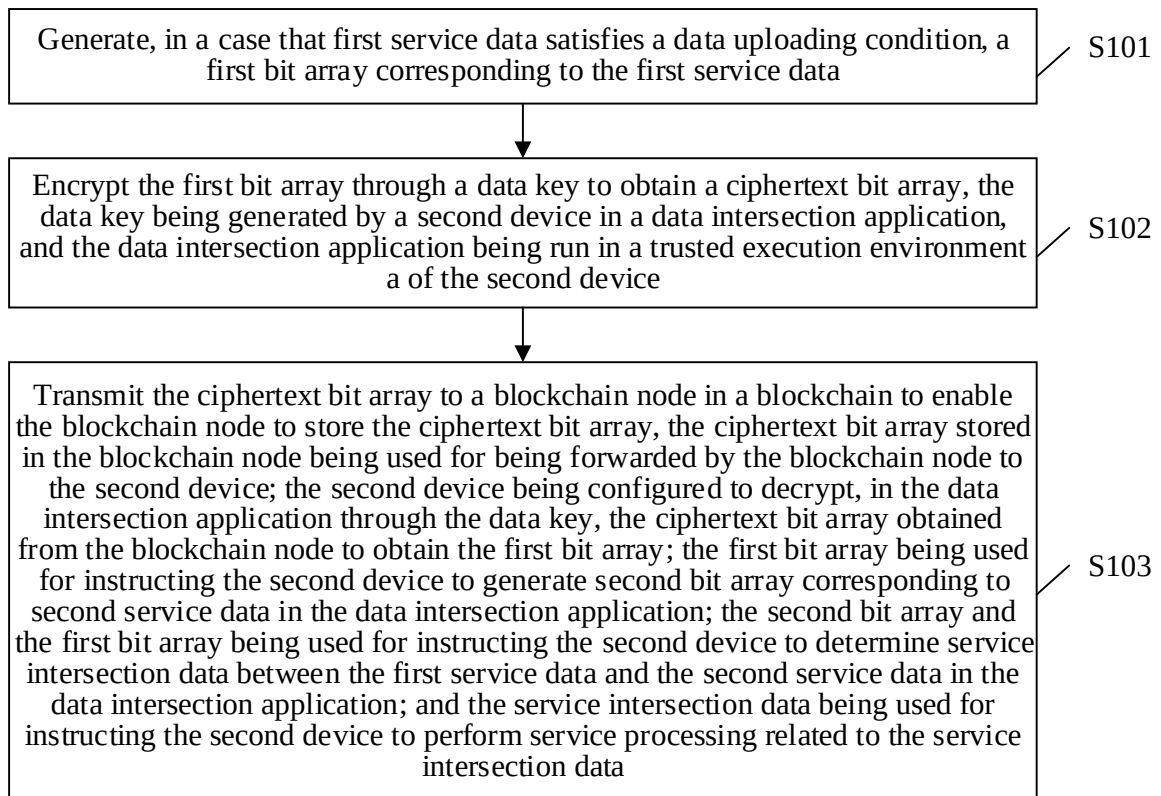
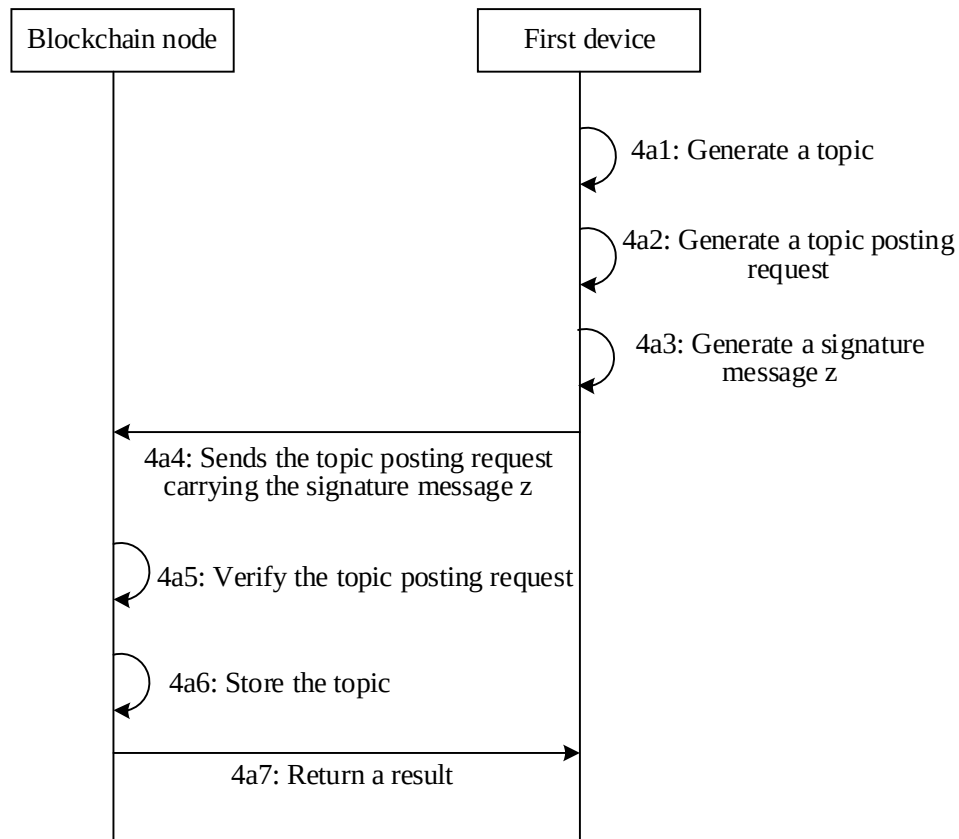


FIG. 3



Topic contract
+ Topic (topic name, uploader, subscriber) + Subscription request (request identifier, topic name, subscriber, and request processing state) + Latest valid subscription request (topic name, request identifier)
+ Post the topic (topic name) + Subscribe the topic (topic name) + Obtain the latest valid subscription request (topic name) + Update the topic subscription state (topic name, state) + Is there a valid object (object identifier) + Has the topic been subscribed by another object (topic name) + Has the topic existed (topic name)

FIG. 4a

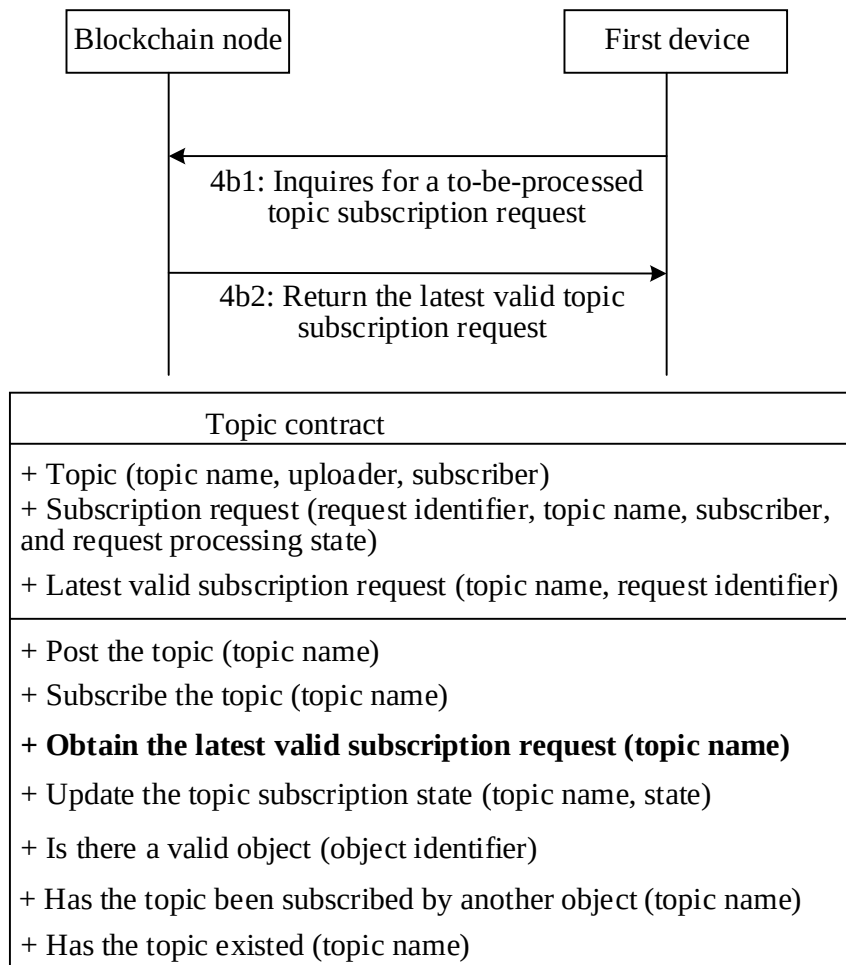


FIG. 4b

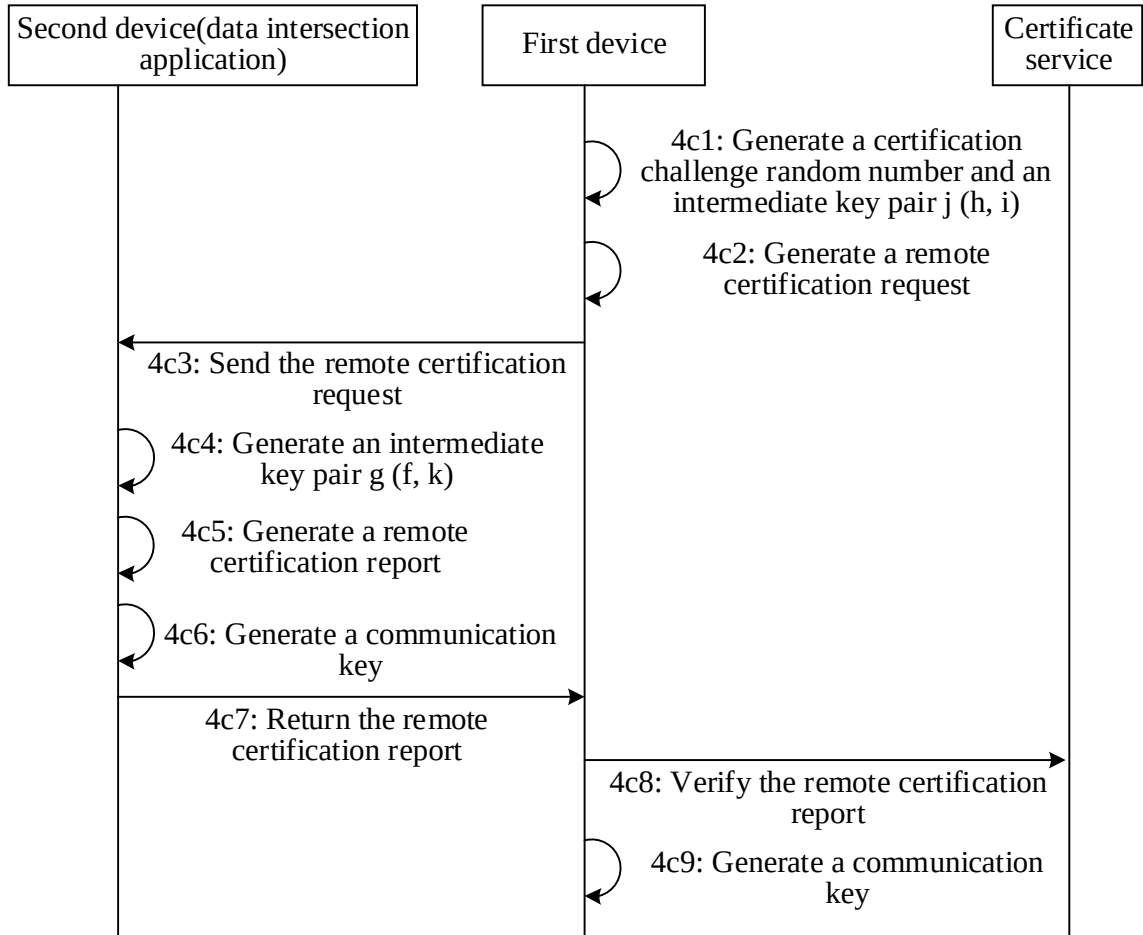


FIG. 4c

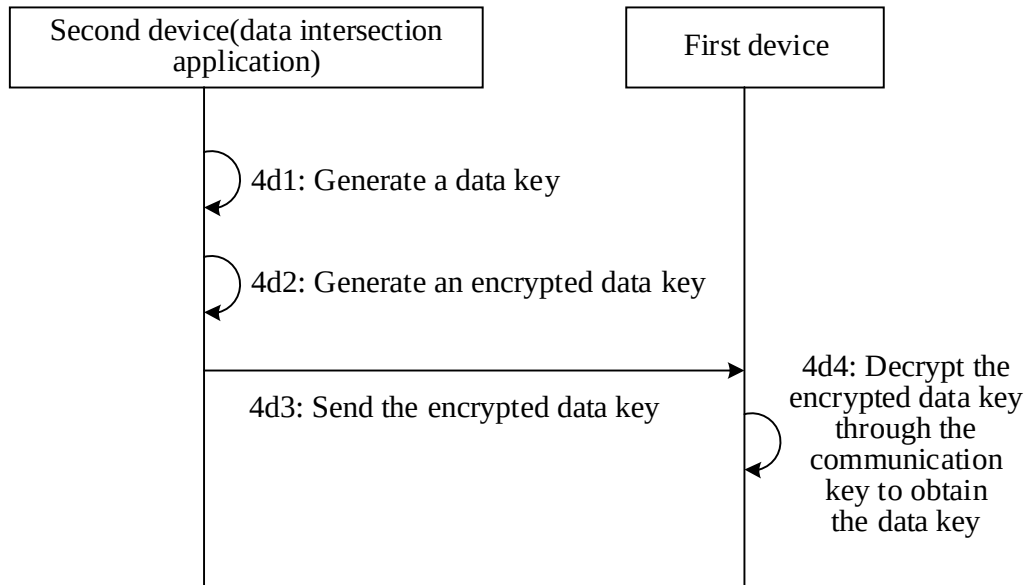


FIG. 4d

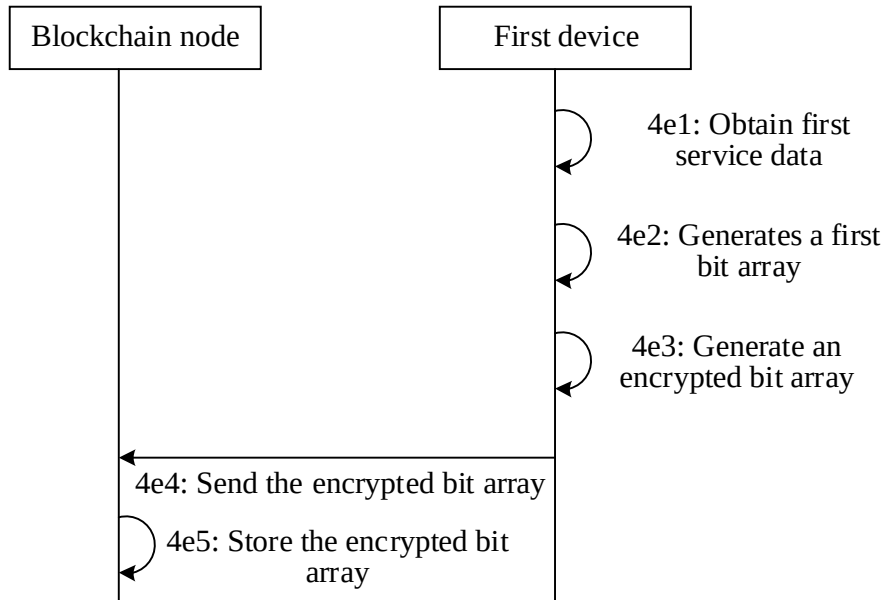


FIG. 4e

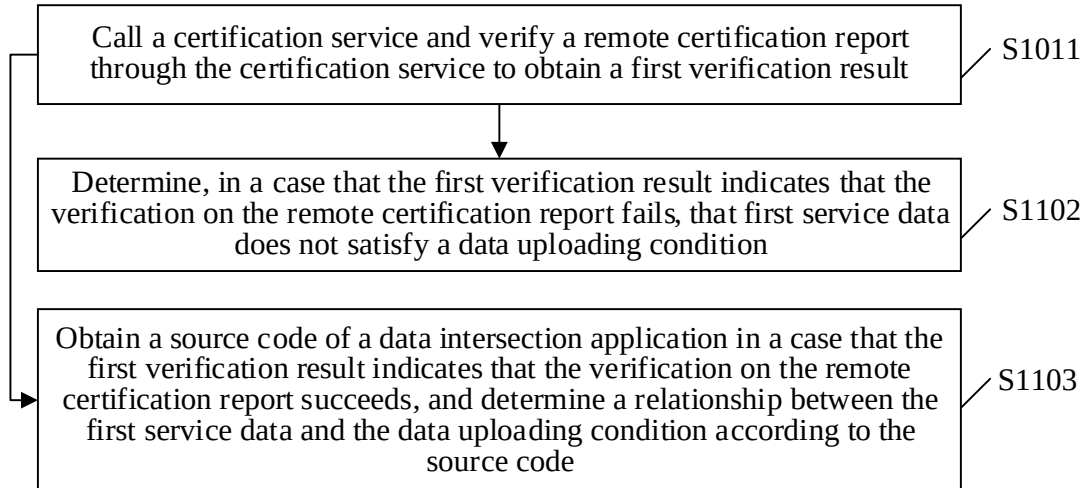


FIG. 5

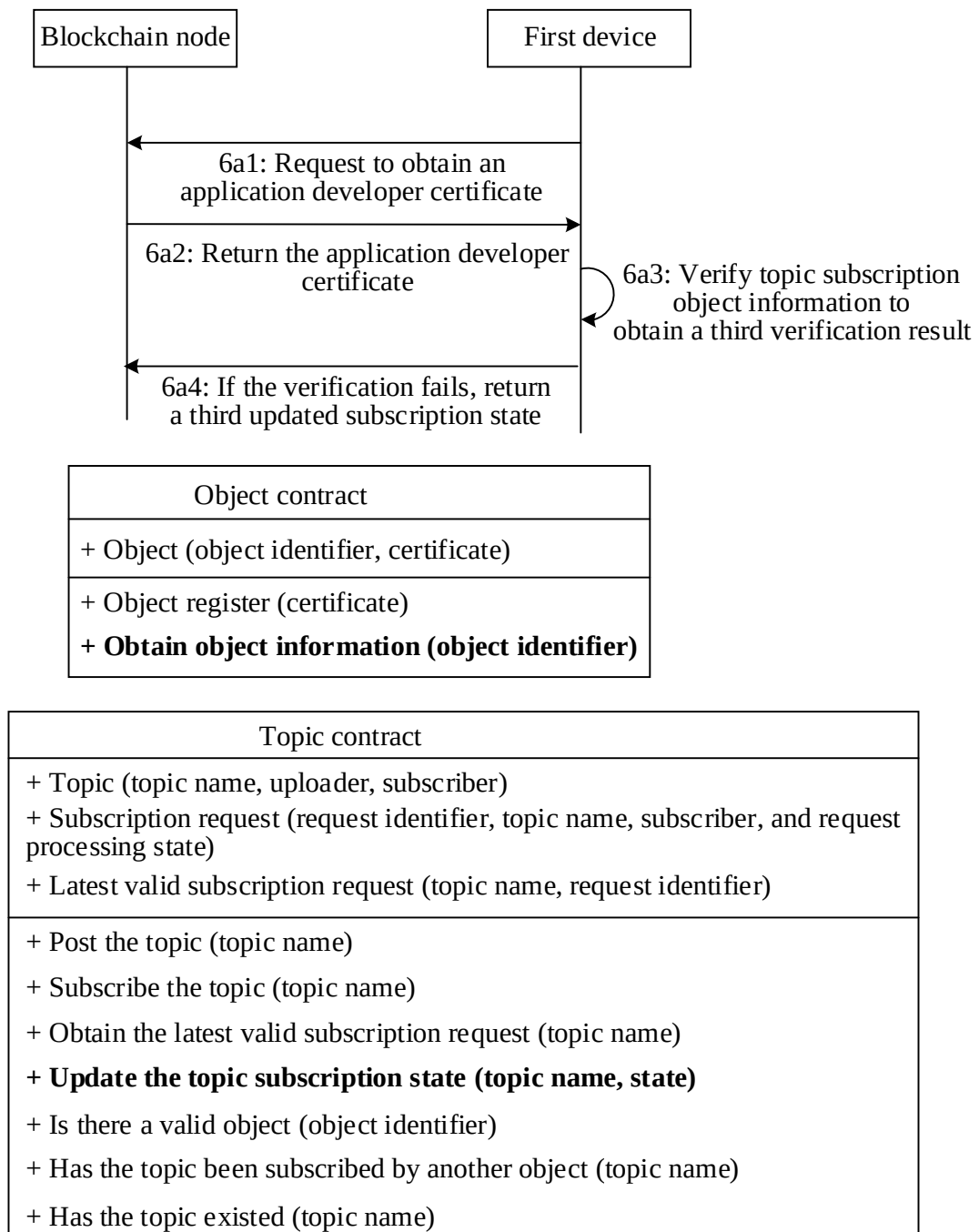


FIG. 6a

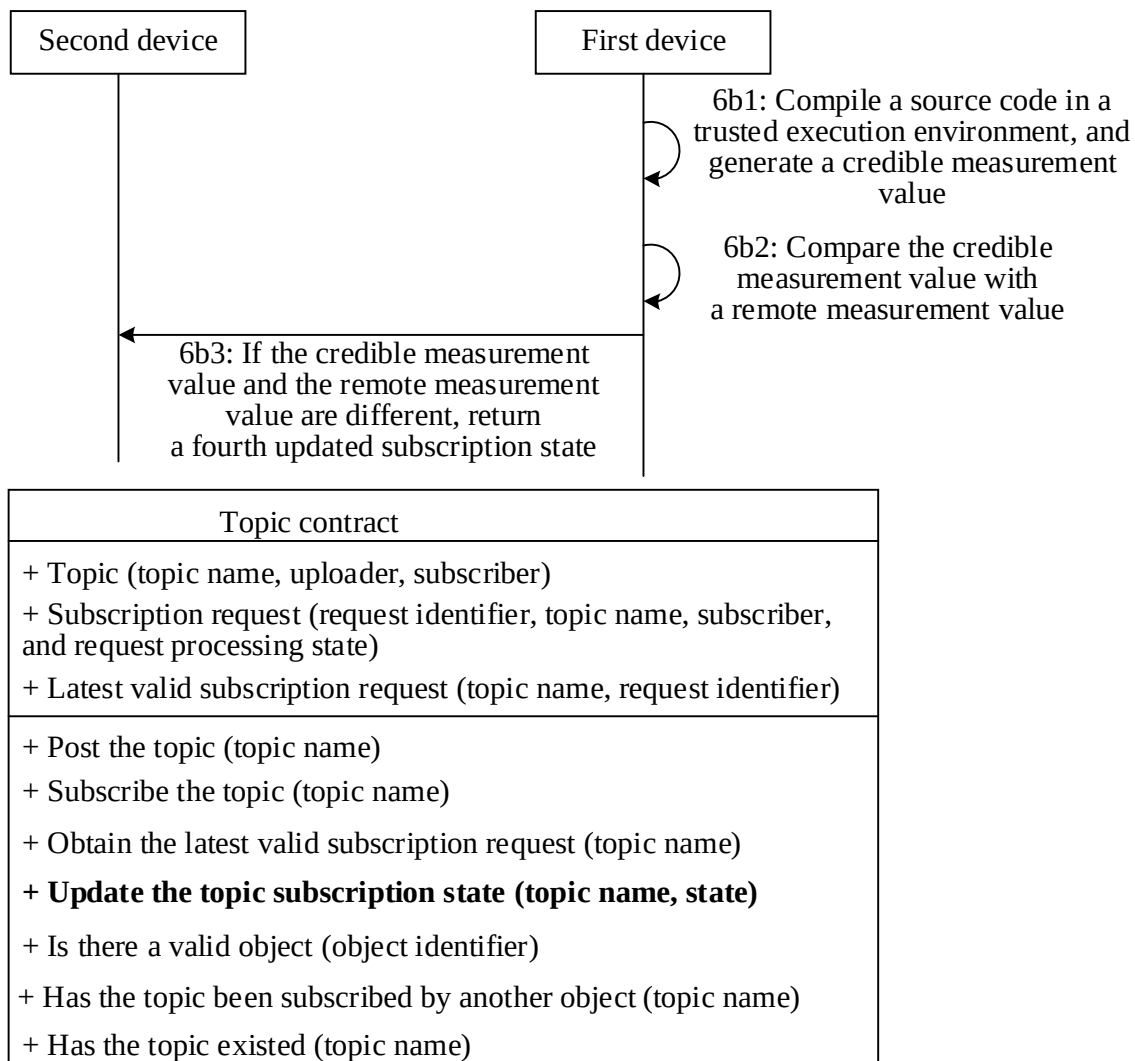


FIG. 6b

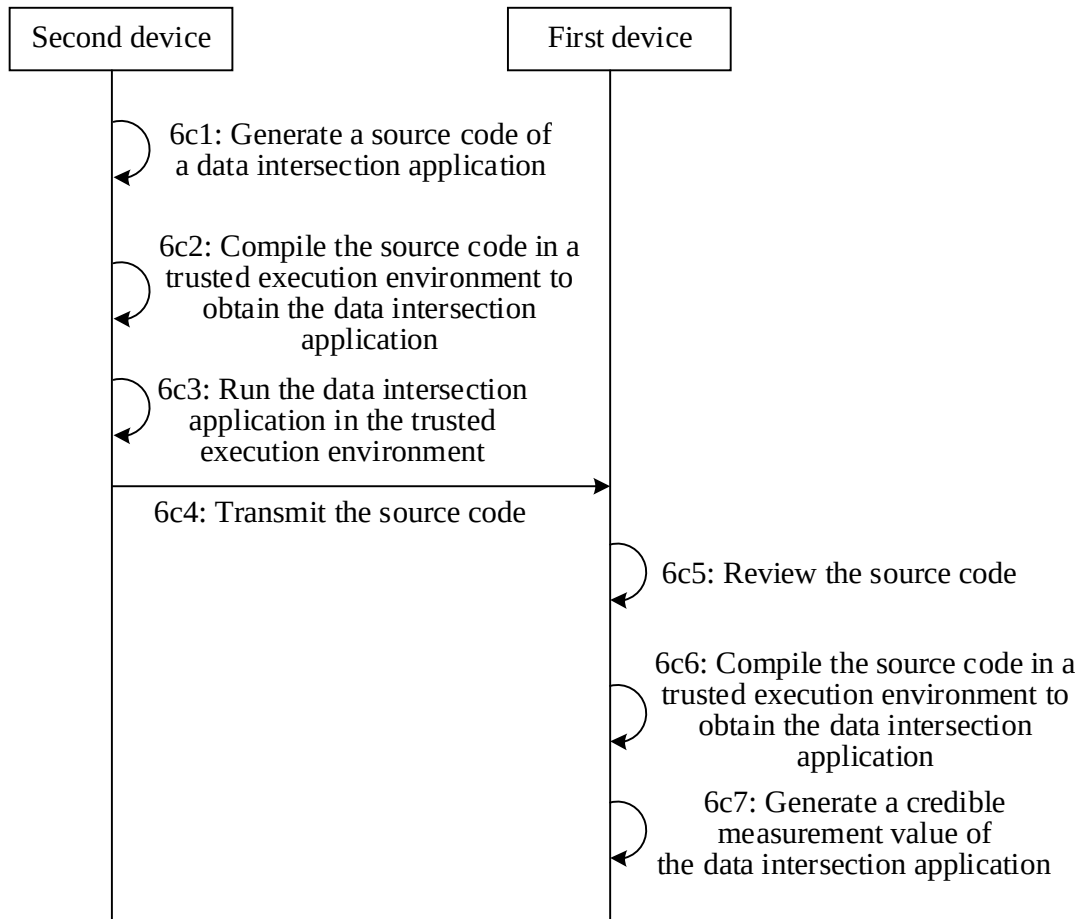


FIG. 6c

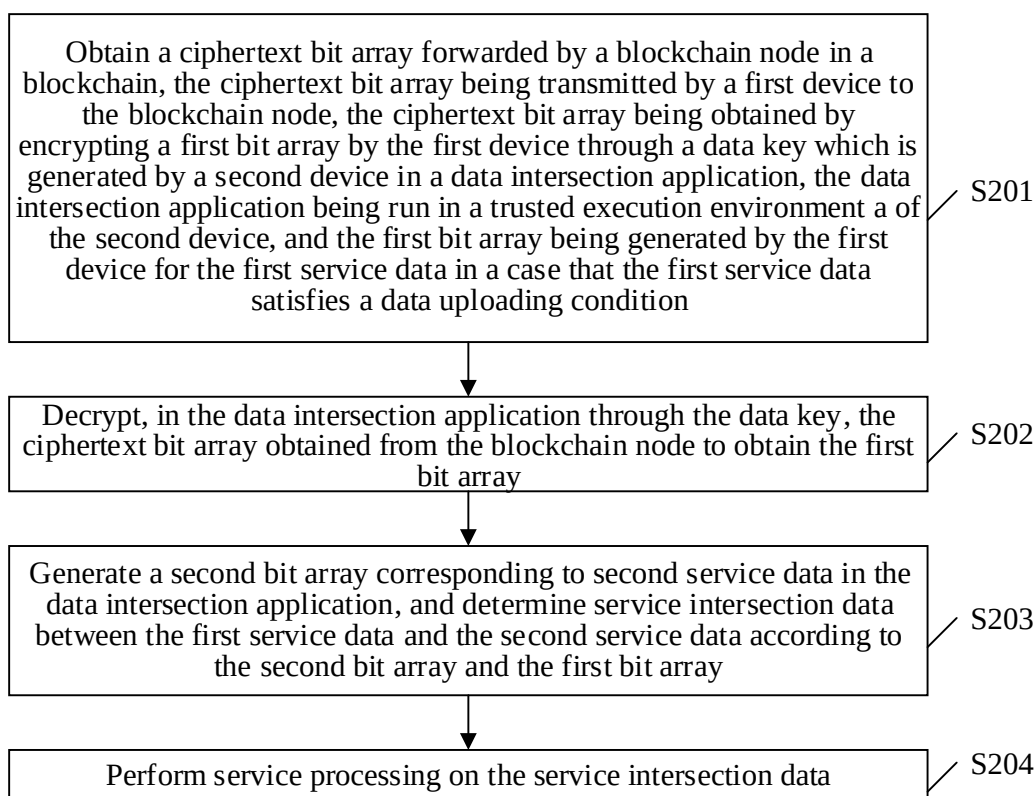


FIG. 7

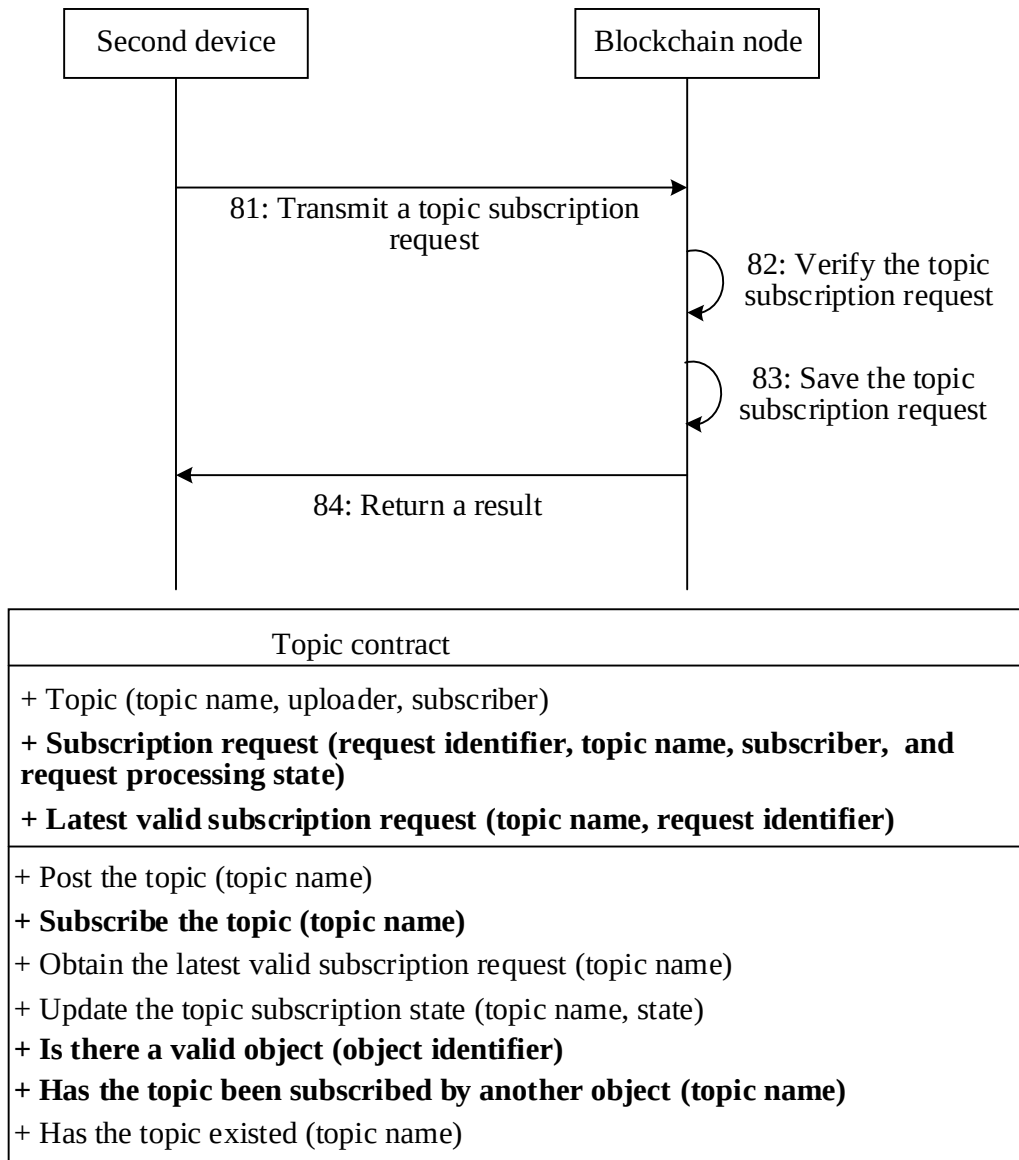


FIG. 8

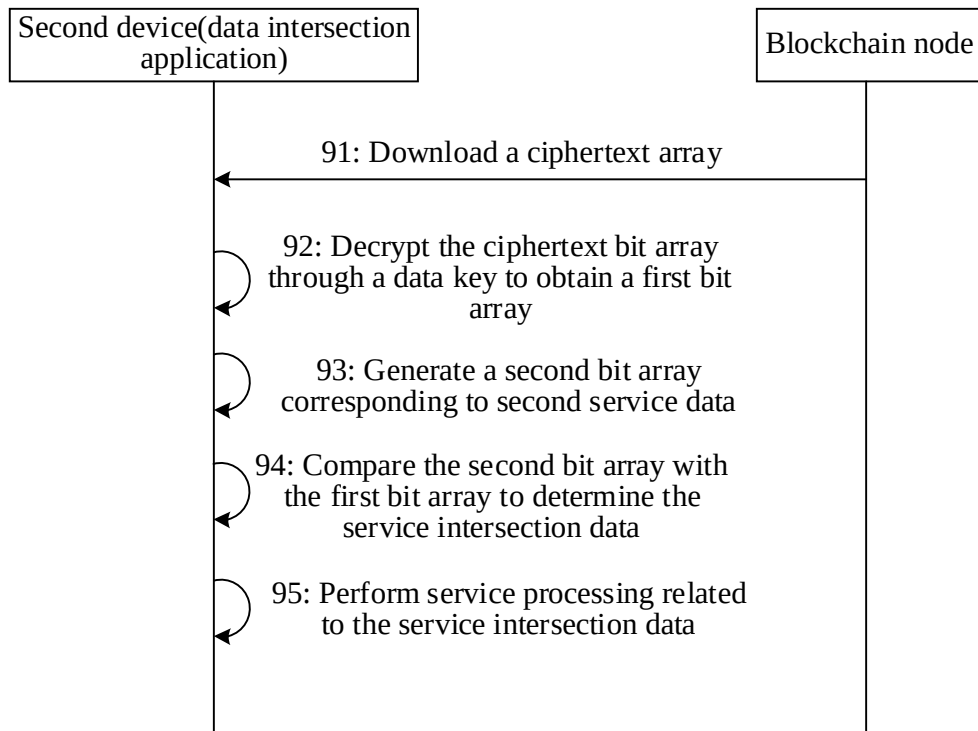


FIG. 9

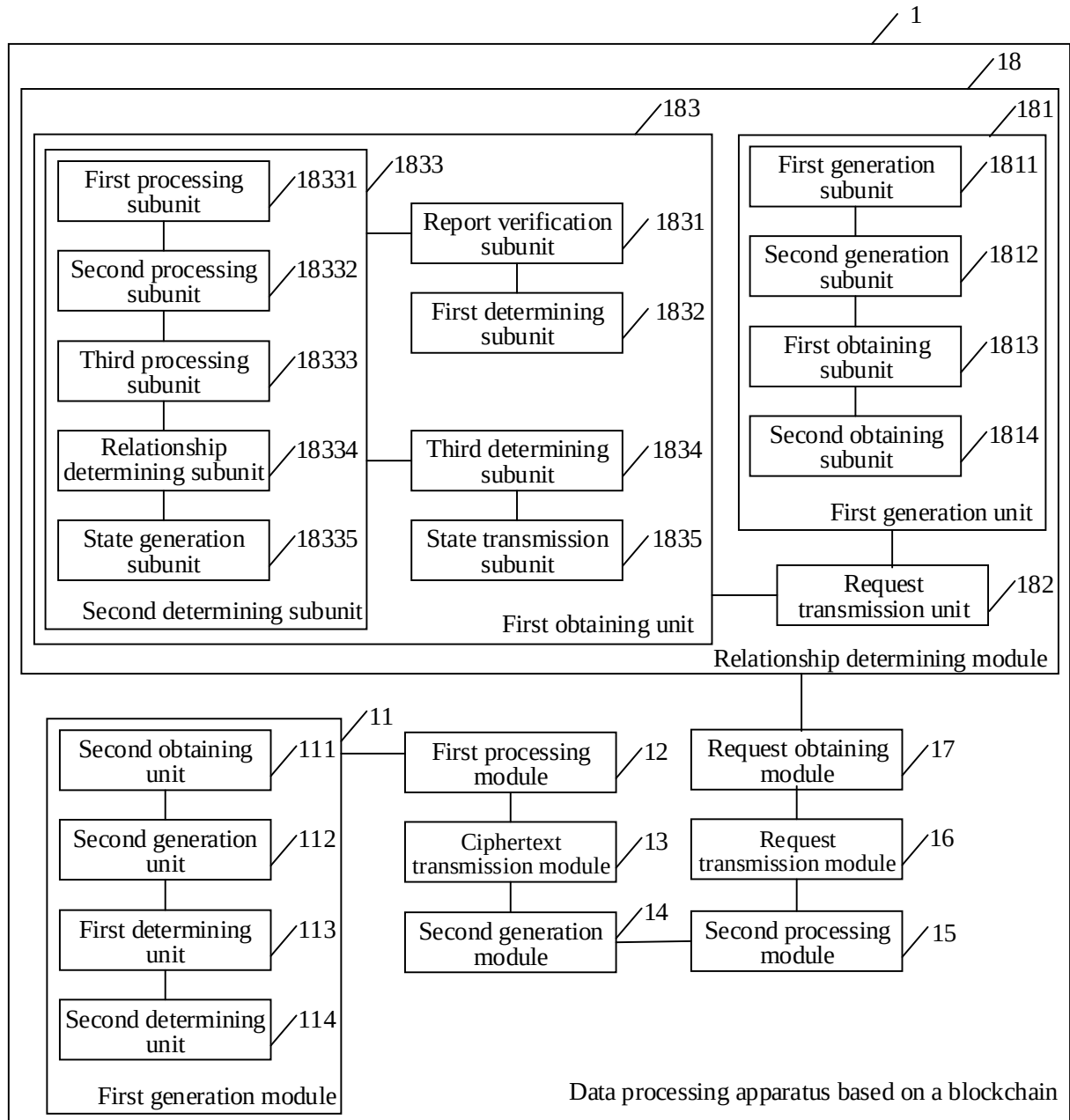


FIG. 10

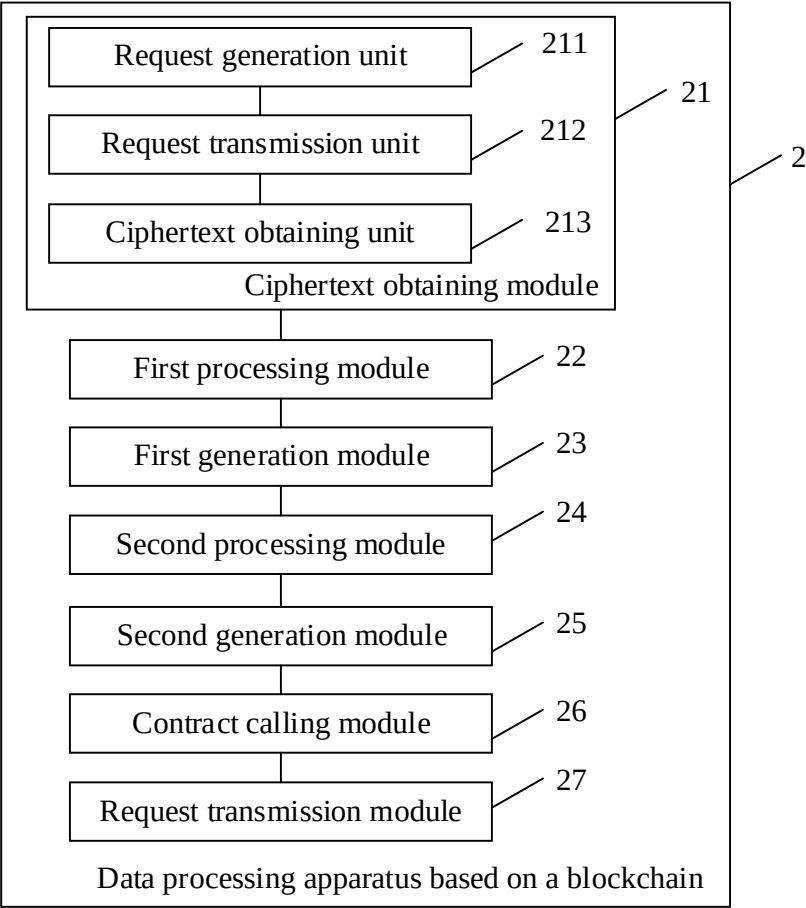


FIG. 11

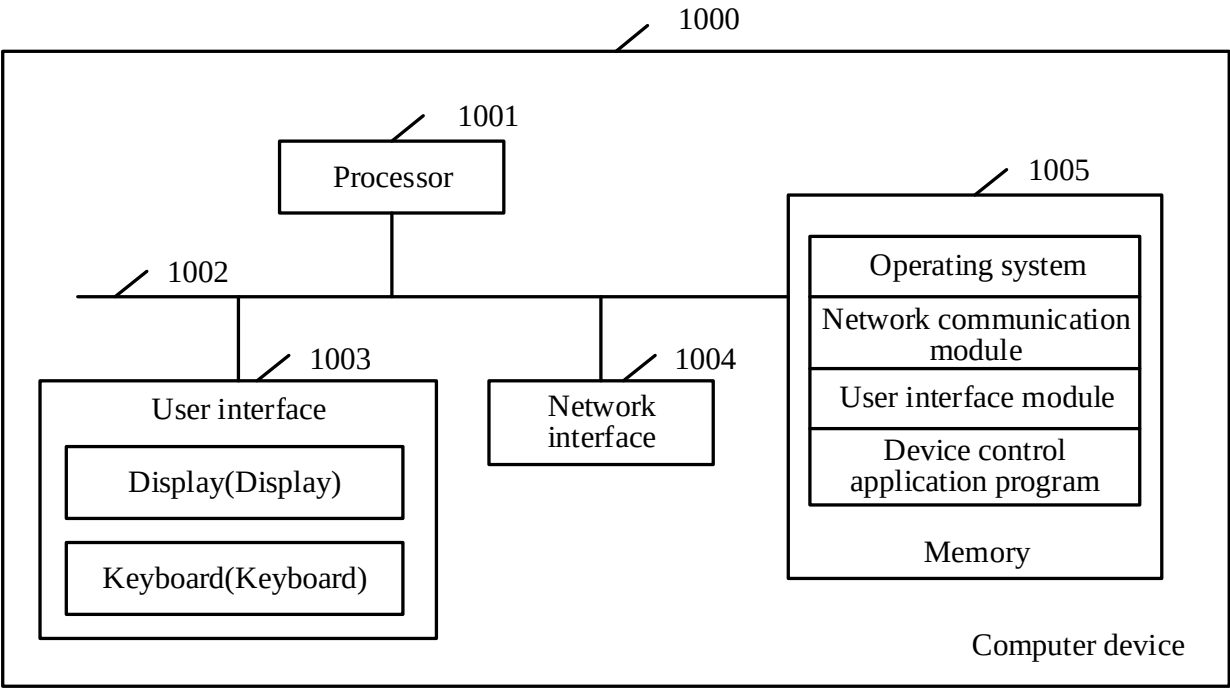


FIG. 12