

CLAIMS

1. A third-party settlement control method, applicable to a blockchain network comprising a third-party settlement node and a plurality of transaction participant
5 nodes, the method being performed by an electronic device and comprising:

responding, by the third-party settlement node, to a settlement request, and transmitting the settlement request to transaction participant nodes corresponding to the settlement request;

receiving, by the third-party settlement node, acceptance opinions transmitted by
10 the transaction participant nodes, the acceptance opinions being used for indicating results of processing the settlement request by the transaction participant nodes; and

determining, by the third-party settlement node, transaction consensus information according to the received acceptance opinions, and performing a third-party settlement according to the transaction consensus information, the transaction
15 consensus information being used for indicating whether the transaction participant nodes reach a complete consensus on the settlement request.

2. The method according to claim 1, wherein after the third-party settlement node transmits the settlement request to the transaction participant nodes corresponding to the settlement request, the method further comprises:

20 periodically initiating, for each of the transaction participant nodes, a query to the transaction participant node in a case that the third-party settlement node does not receive, within a first preset duration, an acceptance opinion transmitted by the transaction participant node, until the acceptance opinion transmitted by the transaction participant node is received or a quantity of queries reaches a first preset
25 threshold.

3. The method according to claim 1 or 2, wherein after the third-party settlement node receives the acceptance opinions transmitted by the transaction participant nodes and before the third-party settlement node determines the transaction consensus

information according to the received acceptance opinions, the method further comprises:

5 broadcasting, by the third-party settlement node for each of the transaction participant nodes, a received acceptance opinion of the transaction participant node, so that after receiving the acceptance opinion broadcasted by the third-party settlement node, another transaction participant node determines transaction consensus information according to the received acceptance opinion and an acceptance opinion of the another transaction participant node.

10 4. The method according to claim 3, wherein after the third-party settlement node broadcasts the received acceptance opinion, the method further comprises:

15 periodically forwarding, by the third-party settlement node, the acceptance opinion to the another transaction participant node in a case that the third-party settlement node does not receive, within a second preset duration, feedback information transmitted by the another transaction participant node, until the feedback information transmitted by the another transaction participant node is received or a quantity of forwarding times reaches a second preset threshold, the feedback information being used for indicating that the another transaction participant node receives the acceptance opinion broadcasted by the third-party settlement node.

20 5. The method according to claim 1, wherein the determining, by the third-party settlement node, transaction consensus information according to the received acceptance opinions comprises:

25 determining that the transaction consensus information is a transaction success in a case that the third-party settlement node receives the acceptance opinions of all the transaction participant nodes and all the acceptance opinions are allowing a transaction; or

 determining that the transaction consensus information is a transaction failure in a case that the third-party settlement node receives the acceptance opinions of all the transaction participant nodes and at least one of the acceptance opinions is

disallowing a transaction; or

determining that the transaction consensus information is a transaction failure in a case that the third-party settlement node fails to receive the acceptance opinions of any one of the transaction participant nodes.

5 6. A third-party settlement control method, applicable to a blockchain network comprising a third-party settlement node and a plurality of transaction participant nodes, the method being performed by an electronic device and comprising:

for each of the transaction participant nodes, receiving, by the transaction participant node, a settlement request transmitted by the third-party settlement node;

10 determining, by the transaction participant node, an acceptance opinion corresponding to the settlement request, the acceptance opinion being used for indicating a result of processing the settlement request by the transaction participant node; and

transmitting, by the transaction participant node, the acceptance opinion to the
15 third-party settlement node, so that the third-party settlement node determines transaction consensus information according to the acceptance opinion and performs a third-party settlement according to the transaction consensus information, the transaction consensus information being used for indicating whether transaction participant nodes reach a complete consensus on the settlement request.

20 7. The method according to claim 6, wherein the determining, by the transaction participant node, an acceptance opinion corresponding to the settlement request comprises:

determining, by the transaction participant node, the acceptance opinion
corresponding to the settlement request according to a result of freezing a settlement
25 amount corresponding to the settlement request in a case that the transaction participant node is a payer node; or

performing, by the transaction participant node, service logic verification on the

transaction request according to a service rule corresponding to the settlement request in a case that the transaction participant node is not a payer node, and determining the acceptance opinion on the settlement request according to a verification result.

8. The method according to claim 6, wherein after the transaction participant
5 node transmits the acceptance opinion to the third-party settlement node, the method further comprises:

receiving, by the transaction participant node, acceptance opinions of other transaction participant nodes that are broadcasted by the third-party settlement node; and

10 determining, by the transaction participant node, the transaction consensus information according to the received acceptance opinions and the acceptance opinion of the transaction participant node.

9. The method according to claim 8, wherein the determining the transaction consensus information according to the received acceptance opinions and the
15 acceptance opinion of the transaction participant node comprises:

determining that the transaction consensus information is a transaction success in a case that the transaction participant node receives the acceptance opinion of all the other transaction participant nodes and acceptance opinions of all transaction participant nodes are allowing a transaction; or

20 determining that the transaction consensus information is a transaction failure in a case that the transaction participant node receives the acceptance opinion of all the other transaction participant nodes and an acceptance opinion of at least one transaction participant node is disallowing a transaction; or

determining that the transaction consensus information is a transaction failure in
25 a case that the transaction participant node fails to receive the acceptance opinion of any one of the other transaction participant nodes.

10. The method according to claim 8, after the receiving, by the transaction

participant node, acceptance opinions of other transaction participant nodes that are broadcasted by the third-party settlement node, the method further comprises:

transmitting, by the transaction participant node, feedback information for each of the received acceptance opinions to the third-party settlement node, the feedback information being used for indicating that the transaction participant node receives the
5 acceptance opinion broadcasted by the third-party settlement node.

11. A third-party settlement control apparatus, applicable to a blockchain network comprising a third-party settlement node and a plurality of transaction participant nodes, the apparatus comprising:

10 a first transmission unit, configured to respond to a settlement request, and transmit the settlement request to transaction participant nodes corresponding to the settlement request;

a first receiving unit, configured to receive acceptance opinions transmitted by the transaction participant nodes, the acceptance opinions being used for indicating
15 results of processing the settlement request by the transaction participant nodes; and

a processing unit, configured to determine transaction consensus information according to the received acceptance opinions, and perform a third-party settlement according to the transaction consensus information, the transaction consensus information being used for indicating whether the transaction participant nodes reach
20 a complete consensus on the settlement request.

12. A third-party settlement control apparatus, applicable to a blockchain network comprising a third-party settlement node and a plurality of transaction participant nodes, the apparatus comprising:

a second receiving unit, configured to receive a settlement request transmitted by
25 a third-party settlement node;

a first determining unit, configured to determine an acceptance opinion corresponding to the settlement request, the acceptance opinion being used for

indicating a result of processing the settlement request by a transaction participant node in which the apparatus is located; and

a second transmission unit, configured to transmit the acceptance opinion to the third-party settlement node, so that the third-party settlement node determines

5 transaction consensus information according to the acceptance opinion and performs a third-party settlement according to the transaction consensus information, the transaction consensus information being used for indicating whether transaction participant nodes reach a complete consensus on the settlement request.

13. An electronic device, comprising a processor and a memory, the memory
10 storing a program code, the program code, when executed by the processor, causing the processor to perform operations of the method according to any one of claims 1 to 5.

14. An electronic device, comprising a processor and a memory, the memory
storing program code, the program code, when executed by the processor, causing the
15 processor to perform operations of the method according to any one of claims 6 to 10.

15. A non-volatile computer-readable storage medium, comprising program code, when the program code runs on an electronic device, the program code being used for causing the electronic device to perform operations of the method according to any one of claims 1 to 10.