CLAIMS

What is claimed is:

1. A computer-implemented method, the method comprising:

receiving, by a second node in a blockchain, a first transaction sent by a first node in the blockchain;

receiving, by at least one intermediate node in the blockchain, at least one second transaction that is a duplicate of the first transaction, wherein the at least one second transaction is sent by the first node to the at least one intermediate node that is different from the second node;

transmitting the at least one second transaction from the at least one intermediate node to the second node;

executing, by the second node, a first-received transaction that is received the earliest among received transactions, wherein the received transactions include the first transaction and the at least one second transaction; and

upon determining, by the second node, that remaining transactions of the received transactions are identical to the first-received transaction, discarding the remaining transactions.

2. The computer-implemented method of claim 1, wherein determining that the remaining transactions of the received transactions are identical to the first-received transaction includes identifying a digital signature of each of the remaining transactions that matches a digital signature of the first-received transaction.

3. The computer-implemented method of claim 1, wherein the first node in the blockchain and the second node in the blockchain are within different network hubs provided by different network service providers.

4. The computer-implemented method of claim 1, further comprising collecting transmission speed statistics on the received transactions to determine nodes in the blockchain that provide faster transaction transmission speeds.

5. The computer-implemented method of claim 4, further comprising determining, for a given transmission-sending node and based on the transmission speed statistics, a set of preferred nodes to which transactions are to be sent.

6. The computer-implemented method of claim 1, wherein a blockchain transaction acceleration system is implemented in one or more nodes in the blockchain or in a server accessible by the blockchain.

7. The computer-implemented method of claim 1, further comprising determining a plurality of intermediate nodes to use for sending the at least one second transaction.

8. One or more computer-readable storage media encoded with instructions that, when executed by one or more processors, cause the one or more processors to:

receive, by a second node in a blockchain, a first transaction sent by a first node in the blockchain;

receive, by at least one intermediate node in the blockchain, at least one second transaction that is a duplicate of the first transaction, wherein the at least one second transaction is sent by the first node to the at least one intermediate node that is different from the second node;

transmit the at least one second transaction from the at least one intermediate node to the second node;

execute, by the second node, a first-received transaction that is received the earliest among received transactions, wherein the received transactions include the first transaction and the at least one second transaction; and

upon determining, by the second node, that remaining transactions of the received transactions are identical to the first-received transaction, discard the remaining transactions.

9. The one or more computer-readable storage media of claim 8, wherein determining that the remaining transactions of the received transactions are identical to the first-

received transaction includes identifying a digital signature of each of the remaining transactions that matches a digital signature of the first-received transaction.

10. The one or more computer-readable storage media of claim 8, wherein the first node in the blockchain and the second node in the blockchain are within different network hubs provided by different network service providers.

11. The one or more computer-readable storage media of claim 8, further having instructions executable by the one or more processors to collect transmission speed statistics on the received transactions to determine nodes in the blockchain that provide faster transaction transmission speeds.

12. The one or more computer-readable storage media of claim 11, further having instructions executable by the one or more processors to determine, for a given transmission-sending node and based on the transmission speed statistics, a set of preferred nodes to which transactions are to be sent.

13. The one or more computer-readable storage media of claim 8, wherein a blockchain transaction acceleration system is implemented in one or more nodes in the blockchain or in a server accessible by the blockchain.

14. The one or more computer-readable storage media of claim 8, further having instructions executable by the one or more processors to determine a plurality of intermediate nodes to use for sending the at least one second transaction.

15. A system, comprising:

one or more processors; and

one or more computer-readable storage media encoded with instructions that, when executed by the one or more processors, cause the one or more processors to:

receive, by a second node in a blockchain, a first transaction sent by a first node in the blockchain;

receive, by at least one intermediate node in the blockchain, at least one second transaction that is a duplicate of the first transaction, wherein the at least one second transaction is sent by the first node to the at least one intermediate node that is different from the second node;

transmit the at least one second transaction from the at least one intermediate node to the second node;

execute, by the second node, a first-received transaction that is received the earliest among received transactions, wherein the received transactions include the first transaction and the at least one second transaction; and

upon determining, by the second node, that remaining transactions of the received transactions are identical to the first-received transaction, discard the remaining transactions.

16. The system of claim 15, wherein determining that the remaining transactions of the received transactions are identical to the first-received transaction includes identifying a digital signature of each of the remaining transactions that matches a digital signature of the first-received transaction.

17. The system of claim 15, wherein the first node in the blockchain and the second node in the blockchain are within different network hubs provided by different network service providers.

18. The system of claim 15, further having instructions executable by the one or more processors to collect transmission speed statistics on the received transactions to:

determine nodes in the blockchain that provide faster transaction transmission speeds; and

for a given transmission-sending node and based on the transmission speed statistics, a set of preferred nodes to which transactions are to be sent.

19. The system of claim 15, wherein a blockchain transaction acceleration system is implemented in one or more nodes in the blockchain or in a server accessible by the blockchain.

20. The system of claim 15, further having instructions executable by the one or more processors to determine a plurality of intermediate nodes to use for sending the at least one second transaction.