CLAIMS

What is claimed is:

1. A communication method, wherein the method comprises:

receiving, by a terminal device, first clock source information, wherein the first clock source information is clock source information of a wireless communication system; and

sending, by the terminal device, the first clock source information to an adjacent device, wherein the adjacent device is in a network outside the wireless communication system.

2. The method according to claim 1, wherein the receiving, by a terminal device, first clock source information comprises:

receiving, by the terminal device, a first clock source announcement from a user plane network element, wherein the first clock source announcement comprises the first clock source information.

3. The method according to claim 2, wherein the sending, by the terminal device, the first clock source information to an adjacent device comprises:

sending, by the terminal device, the first clock source announcement to the adjacent device.

4. The method according to claim 3, wherein the method further comprises:

when the terminal device determines that the first clock source information is the clock source information of the wireless communication system, generating, by the terminal device, a second clock source announcement based on the first clock source information, wherein the second clock source announcement comprises the first clock source information; and

sending, by the terminal device, the second clock source announcement to the adjacent device.

5. The method according to claim 2, wherein the sending, by the terminal device, the first clock source information to an adjacent device comprises:

when the terminal device determines that the first clock source information is the clock source information of the wireless communication system, generating, by the terminal device, a third clock source announcement based on the first clock source information, wherein the third clock source announcement comprises the first clock source information; and

sending, by the terminal device, the third clock source announcement to the adjacent device.

6. The method according to claim 4 or 5, wherein the method further comprises:

storing, by the terminal device, the first clock source information or the first clock source

announcement.

7. The method according to any one of claims 2 to 6, wherein the method further comprises:

when the terminal device determines that the first clock source information is the clock source information of the wireless communication system, and a clock source corresponding to the first clock source information is an optimal clock source, generating, by the terminal device, a clock synchronization packet, and sending the clock synchronization packet to the adjacent device.

8. The method according to any one of claims 4 to 7, wherein the first clock source announcement comprises indication information, and the indication information indicates that the first clock source information is the clock source information of the wireless communication system; and the method further comprises:

determining, by the terminal device based on the indication information, that the first clock source information is the clock source information of the wireless communication system.

9. The method according to any one of claims 4 to 7, wherein the method further comprises:

determining, by the terminal device based on prestored characteristic information of the clock source information of the wireless communication system, that the first clock source information is the clock source information of the wireless communication system.

10. The method according to claim 2 or 3, wherein the method further comprises:

receiving, by the terminal device, a clock synchronization packet from the user plane network element, wherein the clock synchronization packet comprises a first timestamp, and the first timestamp represents a moment at which the user plane network element sends the clock synchronization packet;

determining, by the terminal device, a forwarding delay of the clock synchronization packet in the wireless communication system based on the first timestamp and a moment at which the terminal device forwards the clock synchronization packet; and

after adding the forwarding delay to a correction field in the clock synchronization packet, sending, by the terminal device, the clock synchronization packet to the adjacent device at the moment at which the terminal device forwards the clock synchronization packet; or sending, by the terminal device, the clock synchronization packet to the adjacent device at the moment at which the terminal device forwards the clock synchronization packet, wherein the first timestamp in the clock synchronization packet is updated to a second timestamp, and the second timestamp is determined based on the forwarding delay.

11. The method according to any one of claims 2 to 10, wherein the method further comprises:

receiving, by the terminal device, a fourth clock source announcement from the adjacent device, wherein the fourth clock source announcement comprises fourth clock source information, and the fourth clock source information is clock source information outside the wireless communication system; and

sending, by the terminal device, the fourth clock source announcement to the user plane network element.

12. The method according to any one of claims 2 to 10, wherein the method further comprises:

receiving, by the terminal device, a fifth clock source announcement from the adjacent device, wherein the fifth clock source announcement comprises fifth clock source information, and the fifth clock source information is clock source information outside the wireless communication system; and

when a clock source corresponding to the fifth clock source information is better than the clock source corresponding to the first clock source information, sending, by the terminal device, the fifth clock source announcement to the user plane network element.

13. The method according to claim 1, wherein the receiving, by a terminal device, first clock source information comprises:

receiving, by the terminal device, the first clock source information from a control plane network element.

14. The method according to claim 13, wherein the sending, by the terminal device, the first clock source information to an adjacent device comprises:

generating, by the terminal device, a sixth clock source announcement based on the first clock source information, wherein the sixth clock source announcement comprises the first clock source information; and

sending, by the terminal device, the sixth clock source announcement to the adjacent device.

15. The method according to claim 13 or 14, wherein the method further comprises:

when a clock source corresponding to the first clock source information is an optimal clock source, generating, by the terminal device, a clock synchronization packet, and sending the clock synchronization packet to the adjacent device.

16. A communication apparatus, wherein the communication apparatus comprises a receiving module and a sending module;

the receiving module is configured to receive first clock source information, wherein the first clock source information is clock source information of a wireless communication system; and

the sending module is configured to send the first clock source information to an adjacent device, wherein the adjacent device is in a network outside the wireless communication system.

17. The communication apparatus according to claim 16, wherein the receiving module is specifically configured to:

receive first clock source announcement from a user plane network element, wherein the first clock source announcement comprises the first clock source information.

18. The communication apparatus according to claim 17, wherein the sending module is specifically configured to:

send the first clock source announcement to the adjacent device.

19. The communication apparatus according to claim 18, wherein the communication apparatus further comprises a processing module;

the processing module is configured to: when determining that the first clock source information is the clock source information of the wireless communication system, generate a second clock source announcement based on the first clock source information, wherein the second clock source announcement comprises the first clock source information; and

the sending module is further configured to send the second clock source announcement to the adjacent device.

20. The communication apparatus according to claim 17, wherein the communication apparatus further comprises a processing module;

the processing module is configured to: when determining that the first clock source information is the clock source information of the wireless communication system, generate a third clock source announcement based on the first clock source information, wherein the third clock source announcement comprises the first clock source information; and

the sending module is specifically configured to:

send the third clock source announcement to the adjacent device.

21. The communication apparatus according to claim 19 or 20, wherein the communication apparatus further comprises a storage module; and

the storage module is configured to store the first clock source information or the first clock source announcement.

22. The communication apparatus according to any one of claims 17 to 21, wherein the communication apparatus further comprises a processing module;

the processing module is configured to: when determining that the first clock source information is the clock source information of the wireless communication system, and a clock source corresponding to the first clock source information is an optimal clock source, generate a clock synchronization packet; and

the sending module is further configured to send the clock synchronization packet to the adjacent device.

23. The communication apparatus according to any one of claims 19 to 22, wherein the first clock source announcement comprises indication information, and the indication information indicates that the first clock source information is the clock source information of the wireless communication system; and

the processing module is further configured to determine, based on the indication information, that the first clock source information is the clock source information of the wireless communication system.

24. The communication apparatus according to any one of claims 19 to 22, wherein the processing module is further configured to determine, based on prestored characteristic information of the clock source information of the wireless communication system, that the first clock source information is the clock source information of the wireless communication system.

25. The communication apparatus according to claim 17 or 18, wherein the communication apparatus further comprises a processing module;

the receiving module is further configured to receive a clock synchronization packet from the user plane network element, wherein the clock synchronization packet comprises a first timestamp, and the first timestamp represents a moment at which the user plane network element sends the clock synchronization packet;

the processing module is further configured to determine a forwarding delay of the clock synchronization packet in the wireless communication system based on the first timestamp and a moment at which the communication apparatus forwards the clock synchronization packet; and

the sending module is further configured to: after the processing module adds the forwarding delay to a correction field in the clock synchronization packet, send the clock synchronization packet to the adjacent device at the moment at which the communication apparatus forwards the

clock synchronization packet; or the sending module is further configured to send the clock synchronization packet to the adjacent device at the moment at which the communication apparatus forwards the clock synchronization packet, wherein the first timestamp in the clock synchronization packet is updated to a second timestamp, and the second timestamp is determined based on the forwarding delay.

26. The communication apparatus according to any one of claims 17 to 25, wherein the receiving module is further configured to receive a fourth clock source announcement from the adjacent device, wherein the fourth clock source announcement comprises fourth clock source information, and the fourth clock source information is clock source information outside the wireless communication system; and

the sending module is further configured to send the fourth clock source announcement to the user plane network element.

27. The communication apparatus according to any one of claims 17 to 25, wherein the receiving module is further configured to receive a fifth clock source announcement from the adjacent device, wherein the fifth clock source announcement comprises fifth clock source information, and the fifth clock source information is clock source information outside the wireless communication system; and

the sending module is further configured to: when a clock source corresponding to the fifth clock source information is better than the clock source corresponding to the first clock source information, send the fifth clock source announcement to the user plane network element.

28. The communication apparatus according to claim 16, wherein the receiving module is specifically configured to:

receive the first clock source information from a control plane network element.

29. The communication apparatus according to claim 28, wherein the communication apparatus further comprises a processing module;

the processing module is configured to generate a sixth clock source announcement based on the first clock source information, wherein the sixth clock source announcement comprises the first clock source information; and

the sending module is specifically configured to:

send the sixth clock source announcement to the adjacent device.

30. The communication apparatus according to claim 28 or 29, wherein the communication

apparatus further comprises a processing module; and

the processing module is configured to: when a clock source corresponding to the first clock source information is an optimal clock source, generate a clock synchronization packet, and send the clock synchronization packet to the adjacent device.