CLAIMS

What is claimed is:

1. A communication method, wherein the method comprises:

obtaining, by a first direct communication discovery name management function network element, a security parameter of a first terminal device, wherein a security parameter is required for establishing a PC5 connection between the first terminal device and a second terminal device;

receiving, by the first direct communication discovery name management function network element, a security parameter of the second terminal device from a second direct communication discovery name management function network element; and

determining, by the first direct communication discovery name management function network element based on whether the security parameter of the first terminal device matches the security parameter of the second terminal device, whether the first terminal device and the second terminal device support mutual communication.

2. The method according to claim 1, wherein the determining, by the first direct communication discovery name management function network element based on whether the security parameter of the first terminal device matches the security parameter of the second terminal device, whether the first terminal device and the second terminal device support mutual communication comprises:

when the security parameter of the first terminal device does not match the security parameter of the second terminal device, determining, by the first direct communication discovery name management function network element, that the first terminal device and the second terminal device do not support mutual communication.

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

sending, by the first direct communication discovery name management function network element, first indication information indicating that the first terminal device and the second terminal device do not support mutual communication.

4. The method according to claim 1, wherein the determining, by the first direct communication discovery name management function network element based on whether the security parameter of the first terminal device matches the security parameter of the second terminal device, whether the first terminal device and the second terminal device support mutual

communication comprises:

when the security parameter of the first terminal device matches the security parameter of the second terminal device, determining, by the first direct communication discovery name management function network element, that the first terminal device and the second terminal device support mutual communication.

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

sending, by the first direct communication discovery name management function network element, second indication information indicating that the first terminal device and the second terminal device support mutual communication.

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

sending, by the first direct communication discovery name management function network element, a discovery response to the first terminal device, wherein the discovery response comprises a discovery parameter for service discovery.

7. The method according to any one of claims 1 to 6, wherein the method further comprises:

sending, by the first direct communication discovery name management function network element, the security parameter of the first terminal device to the first terminal device.

8. The method according to any one of claims 1 to 7, wherein the security parameter comprises a security policy and/or a security capability.

9. The method according to claim 8, wherein the security parameter comprises the security capability, and the obtaining, by a first direct communication discovery name management function network element, a security parameter of a first terminal device comprises:

receiving, by the first direct communication discovery name management function network element, the security capability of the first terminal device from a corresponding mobility management network element; or

receiving, by the first direct communication discovery name management function network element, the security capability of the first terminal device from the first terminal device.

10. The method according to claim 8, wherein the security parameter comprises the security policy, and the obtaining, by a first direct communication discovery name management function network element, a security parameter of a first terminal device comprises:

receiving, by the first direct communication discovery name management function network element, the security policy of the first terminal device from the first terminal device;

obtaining, by the first direct communication discovery name management function network element, the security policy of the first terminal device from a corresponding policy control network element; or

obtaining, by the first direct communication discovery name management function network element, the security policy of the first terminal device from a corresponding unified data management network element.

11. The method according to any one of claims 8 to 10, wherein the security policy comprises a user plane confidentiality protection policy and an integrity protection policy in the PC5 connection; and

the security capability comprises one or more confidentiality protection algorithms and one or more integrity protection algorithms supported in the PC5 connection.

12. A first direct communication discovery name management function network element, wherein the first direct communication discovery name management function network element comprises a processing module and a transceiver module, wherein

the processing module is configured to obtain a security parameter of a first terminal device, wherein a security parameter is required for establishing a PC5 connection between the first terminal device and a second terminal device;

the transceiver module is configured to receive a security parameter of the second terminal device from a second direct communication discovery name management function network element; and

the processing module is further configured to determine, based on whether the security parameter of the first terminal device matches the security parameter of the second terminal device, whether the first terminal device and the second terminal device support mutual communication.

13. The first direct communication discovery name management function network element according to claim 12, wherein that the processing module is configured to determine, based on whether the security parameter of the first terminal device matches the security parameter of the second terminal device, whether the first terminal device and the second terminal device support mutual communication comprises:

the processing module is configured to: when the security parameter of the first terminal device does not match the security parameter of the second terminal device, determine that the first terminal device and the second terminal device do not support mutual communication.

14. The first direct communication discovery name management function network element according to claim 13, wherein

the transceiver module is further configured to send first indication information indicating that the first terminal device and the second terminal device do not support mutual communication.

15. The first direct communication discovery name management function network element according to claim 12, wherein that the processing module is configured to determine, based on whether the security parameter of the first terminal device matches the security parameter of the second terminal device, whether the first terminal device and the second terminal device support mutual communication comprises:

the processing module is configured to: when the security parameter of the first terminal device matches the security parameter of the second terminal device, determine that the first terminal device and the second terminal device support mutual communication.

16. The first direct communication discovery name management function network element according to claim 15, wherein

the transceiver module is further configured to send second indication information indicating that the first terminal device and the second terminal device support mutual communication.

17. The first direct communication discovery name management function network element according to claim 15, wherein

the transceiver module is further configured to send a discovery response to the first terminal device, wherein the discovery response comprises a discovery parameter for service discovery.

18. The first direct communication discovery name management function network element according to any one of claims 12 to 17, wherein the transceiver module is further configured to send the security parameter of the first terminal device to the first terminal device.

19. The first direct communication discovery name management function network element according to any one of claims 12 to 18, wherein the security parameter comprises a security policy and/or a security capability.

20. The first direct communication discovery name management function network element according to claim 19, wherein the security parameter comprises the security capability, and that the processing module is configured to obtain a security parameter of a first terminal device comprises:

the processing module is configured to receive, by using the transceiver module, the security

capability of the first terminal device from a corresponding mobility management network element; or

the processing module is configured to receive, by using the transceiver module, the security capability of the first terminal device from the first terminal device.

21. The first direct communication discovery name management function network element according to claim 19, wherein the security parameter comprises the security policy, and that the processing module is configured to obtain a security parameter of a first terminal device comprises:

the processing module is configured to receive, by using the transceiver module, the security policy of the first terminal device from the first terminal device;

the processing module is configured to obtain, by using the transceiver module, the security policy of the first terminal device from a corresponding policy control network element; or

the processing module is configured to obtain, by using the transceiver module, the security policy of the first terminal device from a corresponding unified data management network element.

22. The first direct communication discovery name management function network element according to any one of claims 19 to 21, wherein the security policy comprises a user plane confidentiality protection policy and an integrity protection policy in the PC5 connection; and

the security capability comprises one or more confidentiality protection algorithms and one or more integrity protection algorithms supported in the PC5 connection.

23. A communication apparatus, wherein the communication apparatus comprises a processor and an interface circuit, wherein

the interface circuit is configured to receive a computer program or instructions and transmit the computer program or the instructions to the processor; and

the processor is configured to execute the computer program or the instructions, so that the communication apparatus performs the method according to any one of claims 1 to 11.

24. A computer-readable storage medium, comprising a computer program or instructions, wherein when the computer program or the instructions are executed on a communication apparatus, the communication apparatus is enabled to perform the method according to any one of claims 1 to 11.

25. A communication system, wherein the communication system comprises a first direct communication discovery name management function network element and a second direct communication discovery name management function network element;

the first direct communication discovery name management function network element is configured to obtain a security parameter of a first terminal device, wherein a security parameter is required for establishing a PC5 connection between the first terminal device and a second terminal device;

the second direct communication discovery name management function network element is configured to: obtain a security parameter of the second terminal device, and send the security parameter of the second terminal device to the first direct communication discovery name management function network element; and

the first direct communication discovery name management function network element is further configured to: receive the security parameter of the second terminal device from the second direct communication discovery name management function network element, and determine, based on whether the security parameter of the first terminal device matches the security parameter of the second terminal device, whether the first terminal device and the second terminal device support mutual communication.