CLAIMS

What is claimed is:

1. A communication method, comprising:

transmitting, by a terminal device, first capability information to a first network device, wherein the first capability information indicates that the terminal device supports sending ~~and/or receiving~~ first information by using a maximum of a first bandwidth size of bandwidth~~a first quantity of resources~~, and the first information is a sounding reference signal (SRS)~~comprises a reference signal~~;

transmitting, by the terminal device, second capability information to a second network device, wherein the second capability information indicates that the terminal device supports sending ~~and/or receiving~~ second information by using a maximum of a second bandwidth size of bandwidth~~a second quantity of resources~~, and the second information comprises at least one of ~~the following:~~ data or control information;

obtaining, by the terminal device, first configuration information, wherein the first configuration information indicates that a size of bandwidth~~quantity of resources~~ configured for the first information is not greater than the first bandwidth size~~quantity~~; and

obtaining, by the terminal device, second configuration information, wherein the second configuration information indicates that a size of bandwidth~~quantity of resources~~ configured for the second information is not greater than the second ~~quantity~~bandwidth size.

2. The method according to claim 1, wherein the first ~~quantity~~ bandwidth size is greater than the second bandwidth ~~quantity~~size.

3. The method according to claim 1, wherein the first bandwidth size ~~quantity~~ belongs to a first bandwidth size ~~quantity~~ set, and at least one bandwidth size ~~quantity~~ in the first bandwidth size ~~quantity~~ set is greater than the second bandwidth size~~quantity;~~

~~the first quantity belongs to a first quantity set, the second quantity is predefined, and at least one quantity in the first quantity set is greater than the second quantity;~~

~~the first quantity belongs to a first quantity set, the second quantity belongs to a second quantity set, and at least one quantity in the first quantity set is greater than the second quantity;~~

~~the first quantity belongs to a first quantity set, the second quantity belongs to a second quantity set, and at least one quantity in the first quantity set is greater than all quantities in the~~

~~second quantity set;~~

~~the first quantity is predefined, the second quantity is predefined, and the first quantity is greater than the second quantity; or~~

~~the first quantity is predefined, the second quantity is predefined, and the first quantity is not greater than the second quantity~~.

~~4. The method according to any one of claims 1 to 3, wherein the resource is one or more of a bandwidth, a resource block, a carrier, a subband, a frequency range, a frequency segment, a frequency band, a subcarrier spacing, a bandwidth part BWP, a frequency hopping interval, and a quantity of frequency hops within a specific time range.~~

~~5~~4. The method according to any one of claims 1 to ~~4~~3, wherein the method further comprises:

sending, by the terminal device, third capability information to the first network device or the second network device; and

the third capability information indicates:

whether the terminal device supports sending and/or receiving the first information in a carrier aggregation manner; and/or

the terminal device supports sending and/or receiving the first information by using a maximum of M carriers, wherein M is a positive integer.

~~6~~5. The method according to any one of claims 1 to ~~5~~4, wherein the method further comprises:

sending, by the terminal device, fourth capability information to the first network device or the second network device; and

the fourth capability information indicates:

the terminal device does not support sending and/or receiving the second information in a carrier aggregation manner; or

the terminal device supports sending and/or receiving the second information by using a maximum of N carriers, wherein N is a positive integer.

~~7~~6. The method according to claim ~~6~~5, wherein N is less than M; or

N is not greater than M.

~~8. The method according to any one of claims 1 to 7, wherein the method further comprises:~~

~~sending, by the terminal device, fifth capability information to the first network device or the second network device; and~~

~~the fifth capability information indicates:~~

the terminal device supports generating the first information according to a first algorithm;

the terminal device supports generating the first information according to a second algorithm; or

the terminal device supports generating the first information according to a first algorithm and a second algorithm, wherein

the first algorithm and the second algorithm are different algorithms.

9. The method according to any one of claims 1 to 8, wherein the method further comprises:

sending, by the terminal device, sixth capability information to the first network device or the second network device;

the sixth capability information comprises at least one type of the following information: scrambling code information, location information, period information, interval information, frequency hopping information, density information, reserved time information, tuning time information, nonsimultaneous transmit information, and nonsimultaneous receive information;

the scrambling code information comprises at least one of the following: a scrambling code range and a scrambling code value set;

the location information is a location at which the first information is sent and/or received and that can be supported by the terminal device;

the period information is a period in which the first information is sent and/or received and that can be supported by the terminal device;

the interval information is an interval that is between two consecutive times of sending and/or receiving the first information and that can be supported by the terminal device;

the frequency hopping information is one or more of whether the terminal device supports sending and/or receiving the first information in a frequency hopping manner, a quantity of hops for sending and/or receiving the first information in specific time, a quantity of resource blocks RBs occupied for sending and/or receiving the first information at each hop, a resource width for sending and/or receiving the first information corresponding to each hop, a frequency hopping offset for sending and/or receiving the first information, a frequency resource range for sending and/or receiving the first information in a frequency hopping manner, and subcarrier spacing information for sending and/or receiving the first information;

the density information is a quantity of times that the terminal device sends and/or receives the first information within a specific time range;

the reserved time information is a time length that needs to be reserved before the terminal device sends and/or receives the first information, a time length that needs to be reserved after the terminal device sends and/or receives the first information, a time length that needs to be reserved between two times of sending the first information by the terminal device, or a time length that needs to be reserved between two times of receiving the first information by the terminal device;

the tuning time information is switching time between one time of sending first information by the terminal device and next time of sending first information, or switching time between one time of receiving first information by the terminal device and next time of receiving first information;

the nonsimultaneous transmit information indicates that when sending the first information, the terminal device does not support sending information other than the first information; and

the nonsimultaneous receive information indicates that when receiving the first information, the terminal device does not support receiving information other than the first information.

10. The method according to any one of claims 1 to 9, wherein the first configuration information comprises a configuration of a manner of sending and/or receiving the first information; and

the manner of sending and/or receiving the first information comprises: sending and/or receiving, by the terminal device, the first information based on the first capability information, or sending and/or receiving, by the terminal device, the first information based on the second capability information; or

the manner of sending and/or receiving the first information comprises: generating, by the terminal device, the first information according to the first algorithm, or generating the first information according to the second algorithm, wherein the first algorithm and the second algorithm are different algorithms.

11. The method according to any one of claims 1 to 9, wherein the first configuration information comprises information about sending and/or receiving the first information;

the information about sending and/or receiving the first information comprises at least one of the following: scrambling code information, location information, period information, interval information, frequency hopping information, density information, guard time information, tuning time information, nonsimultaneous transmit information, and nonsimultaneous receive information;

the scrambling code information comprises at least one of the following: a scrambling code range and a scrambling code value set;

the location information is a location at which the first information is sent and/or received and that can be supported by the terminal device;

the period information is a period in which the first information is sent and/or received and that can be supported by the terminal device;

the interval information is an interval that is between two consecutive times of sending and/or receiving the first information and that can be supported by the terminal device;

the frequency hopping information is one or more of whether the terminal device supports sending and/or receiving the first information in a frequency hopping manner, a quantity of hops for sending and/or receiving the first information in specific time, a quantity of resource blocks RBs occupied for sending and/or receiving the first information at each hop, a resource width for sending and/or receiving the first information corresponding to each hop, a frequency hopping offset for sending and/or receiving the first information, a frequency resource range for sending and/or receiving the first information in a frequency hopping manner, and subcarrier spacing information for sending and/or receiving the first information;

the density information is a quantity of times that the terminal device sends and/or receives the first information within a specific time range;

the reserved time information is a time length that needs to be reserved before the terminal device sends and/or receives the first information, a time length that needs to be reserved after the terminal device sends and/or receives the first information, a time length that needs to be reserved between two times of sending the first information by the terminal device, or a time length that needs to be reserved between two times of receiving the first information by the terminal device;

the tuning time information is switching time between one time of sending first information by the terminal device and next time of sending first information, or switching time between one time of receiving first information by the terminal device and next time of receiving first information;

the nonsimultaneous transmit information indicates that when sending the first information, the terminal device does not support sending information other than the first information; and

the nonsimultaneous receive information indicates that when receiving the first information, the terminal device does not support receiving information other than the first information.

12. The method according to any one of claims 1 to 9, wherein the first configuration information comprises at least one of the following: whether frequency hopping is enabled, a frequency hopping time domain configuration, or a frequency hopping frequency domain configuration;

the frequency hopping time domain configuration comprises at least one of the following: a start location, an interval, a period, a quantity of symbols occupied by each hop, and a frame or slot configuration; and

the frequency hopping frequency domain configuration comprises at least one of the following: a start RB location, a quantity of RBs occupied by each hop, a resource width corresponding to each hop, a quantity of hops on a frequency corresponding to specific time, a frequency resource range of frequency hopping, subcarrier spacing information, and a frequency hopping offset.

13. The method according to any one of claims 1 to 9, wherein the first configuration information indicates that a manner of sending and/or receiving the first information is one of the following: {first mode, no frequency hopping}, {second mode, frequency hopping}, or {second mode, no frequency hopping};

the first mode indicates that the terminal device sends and/or receives the first information based on the first capability information;

the second mode indicates that the terminal device sends and/or receives the first information based on the second capability information;

the no frequency hopping indicates that the terminal device does not support sending and/or receiving the first information in a frequency hopping manner; and

the frequency hopping indicates that the terminal device supports sending and/or receiving the first information in a frequency hopping manner.

14. The method according to any one of claims 1 to 9, wherein the first configuration information indicates that a manner of sending and/or receiving the first information is one of the following: {first mode, no frequency hopping}, {second mode, frequency hopping}, {second mode, no frequency hopping}, or {first mode, frequency hopping};

the first mode indicates that the terminal device sends and/or receives the first information based on the first capability information;

the second mode indicates that the terminal device sends and/or receives the first information

based on the second capability information;

the no frequency hopping indicates that the terminal device does not support sending and/or receiving the first information in a frequency hopping manner; and

the frequency hopping indicates that the terminal device supports sending and/or receiving the first information in a frequency hopping manner.

15. The method according to any one of claims 1 to 9, wherein

the terminal device sends and/or receives the first information in a predefined sending and/or receiving manner; and

the predefined sending and/or receiving manner comprises at least one of the following:

when a quantity of resources occupied for sending and/or receiving the first information is greater than or equal to the second quantity, sending and/or receiving, by the terminal device, the first information in a no frequency hopping manner;

when a quantity of resources occupied for sending and/or receiving the first information is not greater than the second quantity, sending and/or receiving, by the terminal device, the first information in a frequency hopping manner, or sending and/or receiving, by the terminal device, the first information based on a frequency hopping indication;

when a quantity of resources occupied for sending and/or receiving the first information is greater than or equal to the first quantity, sending and/or receiving, by the terminal device, the first information in a carrier aggregation manner; or

when a quantity of resources occupied for sending and/or receiving the first information is not greater than the first quantity, sending and/or receiving, by the terminal device, the first information in a single carrier manner.

16. The method according to any one of claims 1 to 15, wherein the first network device is a positioning server, and the second network device is a base station; or

the first network device and the second network device are a same base station.

17. A communication method, comprising:

receiving, by a network device, first capability information transmitted byfrom a terminal device, wherein the first capability information indicates that the terminal device supports sending and/or receiving first information by using a maximum of a first bandwidth size of bandwtha first quantity of resources, and the first information is a sounding reference signal (SRS)comprises a reference signal;

receiving, by the network device, second capability information ~~transmitted by~~from the terminal device, wherein the second capability information indicates that the terminal device supports sending ~~and/or receiving~~ second information by using a maximum of a second bandwidth size of bandwidth~~a second quantity of resources~~, and the second information comprises at least one of ~~the following:~~ data or control information;

sending, by the network device, first configuration information to the terminal device, wherein the first configuration information indicates that a size of bandwidth~~quantity of resources~~ configured for the first information is not greater than the first bandwidth size~~quantity~~; and

sending, by the network device, second configuration information to the terminal device, wherein the second configuration information indicates that a size of bandwidth~~quantity of resources~~ configured for the second information is not greater than the second bandwidth size~~quantity~~.

~~1~~8. The method according to claim ~~1~~7, wherein the first bandwidth size ~~quantity~~ is greater than the second bandwidth size~~quantity~~.

9. The method according to claim 7, wherein the first bandwidth size belongs to a first bandwidth size set, and at least one bandwidth size in the first bandwidth size set is greater than the second bandwidth size.

~~19~~10. The method according to ~~claim 17 or 18~~any one of claims 7 to 9, wherein the method further comprises:

receiving, by the network device, third capability information ~~sent by~~from the terminal device; and

the third capability information indicates:

whether the terminal device supports sending and/or receiving the first information in a carrier aggregation manner; and/or

the terminal device supports sending and/or receiving the first information by using a maximum of M carriers, wherein M is a positive integer.

~~20~~11. The method according to any one of claims ~~1~~7 to 1~~0~~9, wherein the method further comprises:

receiving, by the network device, fourth capability information ~~sent by~~from the terminal device; and

the fourth capability information indicates:

the terminal device does not support sending and/or receiving the second information in a carrier aggregation manner; or

the terminal device supports sending and/or receiving the second information by using a maximum of N carriers, wherein N is a positive integer.

12. The method according to claim 11, wherein N is less than M; or

N is not greater than M.

~~21. The method according to any one of claims 17 to 20, wherein the method further comprises:~~

~~receiving, by the network device, fifth capability information sent by the terminal device; and~~

~~the fifth capability information indicates:~~

~~the terminal device supports generating the first information according to a first algorithm;~~

~~the terminal device supports generating the first information according to a second algorithm; or~~

~~the terminal device supports generating the first information according to a first algorithm and a second algorithm, wherein~~

~~the first algorithm and the second algorithm are different algorithms.~~

~~22. The method according to any one of claims 17 to 21, wherein the method further comprises:~~

~~receiving, by the network device, sixth capability information sent by the terminal device;~~

~~the sixth capability information comprises at least one type of the following information: scrambling code information, location information, period information, interval information, frequency hopping information, density information, reserved time information, tuning time information, nonsimultaneous transmit information, and nonsimultaneous receive information;~~

~~the scrambling code information comprises at least one of the following: a scrambling code range and a scrambling code value set;~~

~~the location information is a location at which the first information is sent and/or received and that can be supported by the terminal device;~~

~~the period information is a period in which the first information is sent and/or received and that can be supported by the terminal device;~~

~~the interval information is an interval that is between two consecutive times of sending and/or receiving the first information and that can be supported by the terminal device;~~

the frequency hopping information is one or more of whether the terminal device supports sending and/or receiving the first information in a frequency hopping manner, a quantity of hops for sending and/or receiving the first information in specific time, a quantity of resource blocks RBs occupied for sending and/or receiving the first information at each hop, a resource width for sending and/or receiving the first information corresponding to each hop, a frequency hopping offset for sending and/or receiving the first information, a frequency resource range for sending and/or receiving the first information in a frequency hopping manner, and subcarrier spacing information for sending and/or receiving the first information;

the density information is a quantity of times that the terminal device sends and/or receives the first information within a specific time range;

the reserved time information is a time length that needs to be reserved before the terminal device sends and/or receives the first information, a time length that needs to be reserved after the terminal device sends and/or receives the first information, a time length that needs to be reserved between two times of sending the first information by the terminal device, or a time length that needs to be reserved between two times of receiving the first information by the terminal device;

the tuning time information is switching time between one time of sending first information by the terminal device and next time of sending first information, or switching time between one time of receiving first information by the terminal device and next time of receiving first information;

the nonsimultaneous transmit information indicates that when sending the first information, the terminal device does not support sending information other than the first information; and

the nonsimultaneous receive information indicates that when receiving the first information, the terminal device does not support receiving information other than the first information.

23. The method according to any one of claims 17 to 22, wherein the first configuration information comprises:

a configuration of a manner of sending and/or receiving the first information; and

the manner of sending and/or receiving the first information comprises: sending and/or receiving, by the terminal device, the first information based on the first capability information, or sending and/or receiving, by the terminal device, the first information based on the second capability information; or

the manner of sending and/or receiving the first information comprises: generating, by the

terminal device, the first information according to the first algorithm, or generating the first information according to the second algorithm, wherein the first algorithm and the second algorithm are different algorithms.

24. The method according to any one of claims 17 to 22, wherein the first configuration information comprises information about sending and/or receiving the first information;

the information about sending and/or receiving the first information comprises at least one of the following: scrambling code information, location information, period information, interval information, frequency hopping information, density information, guard time information, tuning time information, nonsimultaneous transmit information, and nonsimultaneous receive information;

the scrambling code information comprises at least one of the following: a scrambling code range and a scrambling code value set;

the location information is a location at which the first information is sent and/or received and that can be supported by the terminal device;

the period information is a period in which the first information is sent and/or received and that can be supported by the terminal device;

the interval information is an interval that is between two consecutive times of sending and/or receiving the first information and that can be supported by the terminal device;

the frequency hopping information is one or more of whether the terminal device supports sending and/or receiving the first information in a frequency hopping manner, a quantity of hops for sending and/or receiving the first information in specific time, a quantity of resource blocks RBs occupied for sending and/or receiving the first information at each hop, a resource width for sending and/or receiving the first information corresponding to each hop, a frequency hopping offset for sending and/or receiving the first information, a frequency resource range for sending and/or receiving the first information in a frequency hopping manner, and subcarrier spacing information for sending and/or receiving the first information;

the density information is a quantity of times that the terminal device sends and/or receives the first information within a specific time range;

the reserved time information is a time length that needs to be reserved before the terminal device sends and/or receives the first information, a time length that needs to be reserved after the terminal device sends and/or receives the first information, a time length that needs to be reserved

between two times of sending the first information by the terminal device, or a time length that needs to be reserved between two times of receiving the first information by the terminal device;

the tuning time information is switching time between one time of sending first information by the terminal device and next time of sending first information, or switching time between one time of receiving first information by the terminal device and next time of receiving first information;

the nonsimultaneous transmit information indicates that when sending the first information, the terminal device does not support sending information other than the first information; and

the nonsimultaneous receive information indicates that when receiving the first information, the terminal device does not support receiving information other than the first information.

25. The method according to any one of claims 17 to 22, wherein the first configuration information comprises at least one of the following: whether frequency hopping is enabled, a frequency hopping time domain configuration, or a frequency hopping frequency domain configuration;

the frequency hopping time domain configuration comprises at least one of the following: a start location, an interval, a period, a quantity of symbols occupied by each hop, and a frame or slot configuration; and

the frequency hopping frequency domain configuration comprises at least one of the following: a start RB location, a quantity of RBs occupied by each hop, a resource width corresponding to each hop, a quantity of hops on a frequency corresponding to specific time, a frequency resource range of frequency hopping, subcarrier spacing information, and a frequency hopping offset.

26. The method according to any one of claims 17 to 22, wherein the first configuration information indicates that a manner of sending and/or receiving the first information is one of the following: {first mode, no frequency hopping}, {second mode, frequency hopping}, or {second mode, no frequency hopping};

the first mode indicates that the terminal device sends and/or receives the first information based on the first capability information;

the second mode indicates that the terminal device sends and/or receives the first information based on the second capability information;

the no frequency hopping indicates that the terminal device does not support sending and/or

receiving the first information in a frequency hopping manner; and

the frequency hopping indicates that the terminal device supports sending and/or receiving the first information in a frequency hopping manner.

27. The method according to any one of claims 17 to 22, wherein the first configuration information indicates that a manner of sending and/or receiving the first information is one of the following: {first mode, no frequency hopping}, {second mode, frequency hopping}, {second mode, no frequency hopping}, or {first mode, frequency hopping};

the first mode indicates that the terminal device sends and/or receives the first information based on the first capability information;

the second mode indicates that the terminal device sends and/or receives the first information based on the second capability information;

the no frequency hopping indicates that the terminal device does not support sending and/or receiving the first information in a frequency hopping manner; and

the frequency hopping indicates that the terminal device supports sending and/or receiving the first information in a frequency hopping manner.

28. The method according to any one of claims 17 to 22, wherein

the terminal device sends and/or receives the first information in a predefined sending and/or receiving manner; and

the predefined sending and/or receiving manner comprises at least one of the following:

when a quantity of resources occupied for sending and/or receiving the first information is greater than or equal to the second quantity, sending and/or receiving, by the terminal device, the first information in a no frequency hopping manner;

when a quantity of resources occupied for sending and/or receiving the first information is not greater than the second quantity, sending and/or receiving, by the terminal device, the first information in a frequency hopping manner, or sending and/or receiving, by the terminal device, the first information based on a frequency hopping indication;

when a quantity of resources occupied for sending and/or receiving the first information is greater than or equal to the first quantity, sending and/or receiving, by the terminal device, the first information in a carrier aggregation manner; or

when a quantity of resources occupied for sending and/or receiving the first information is not greater than the first quantity, sending and/or receiving, by the terminal device, the first

~~information in a single carrier manner.~~

~~29~~13. A communication apparatus, ~~wherein the communication apparatus is a terminal device, and the communication apparatus~~ comprisinges:

a transceiver module, configured to transmit first capability information to a first network device, wherein the first capability information indicates that the terminal device supports sending ~~and/or receiving~~ first information by using a maximum of a first bandwidth size of bandwidth~~a first quantity of resources~~, and the first information is a sounding reference signal (SRS)~~comprises a reference signal~~;

the transceiver module is configured to transmit second capability information to a second network device, wherein the second capability information indicates that the terminal device supports sending ~~and/or receiving~~ second information by using a maximum of a second bandwidth size of bandwidth~~a second quantity of resources~~, and the second information comprises at least one of ~~the following:~~ data or control information; and

a processing module, configured to obtain first configuration information, wherein the first configuration information indicates that a size of bandwidth~~quantity of resources~~ configured for the first information is not greater than the first bandwidth size~~quantity~~;

the processing module is configured to obtain second configuration information, wherein the second configuration information indicates that a size of bandwidth~~quantity of resources~~ configured for the second information is not greater than the second bandwidth size~~quantity~~.

~~30~~14. A communication apparatus, wherein ~~the communication apparatus is a network device, and~~ the communication apparatus comprises a processing module and a transceiver module;

the processing module is configured to receive, by using the transceiver module, first capability information ~~transmitted by~~from a terminal device, wherein the first capability information indicates that the terminal device supports sending ~~and/or receiving~~ first information by using a maximum of a first bandwidth size of bandwidth~~a first quantity of resources~~, and the first information comprises is sounding reference signal (SRS)~~a reference signal~~;

the processing module is configured to receive, by using the transceiver module, second capability information ~~transmitted by~~from the terminal device, wherein the second capability information indicates that the terminal device supports sending ~~and/or receiving~~ second information by using a maximum of a second bandwidth size of bandwidth~~a second quantity of resources~~, and the second information comprises at least one of ~~the following:~~ data or control

information;

the processing module is configured to send first configuration information to the terminal device by using the transceiver module, wherein the first configuration information indicates that a size of bandwidth~~quantity of resources~~ configured for the first information is not greater than the first bandwidth size~~quantity~~; and

the processing module is configured to send second configuration information to the terminal device by using the transceiver module, wherein the second configuration information indicates that a size of bandwidth~~quantity of resources~~ configured for the second information is not greater than the second bandwidth size~~quantity~~.

~~31~~15. A communication system, wherein the communication system comprises a terminal device and a network device;

the terminal device is configured to perform the method according to any one of claims 1 to ~~1~~6; and

the network device is configured to perform the method according to any one of claims ~~1~~7 to ~~28~~12.

~~32~~16. A communication system, wherein the communication system comprises a terminal device, a first network device, and a second network device;

the terminal device is configured to perform the method according to any one of claims 1 to ~~1~~6;

the first network device is configured to receive first capability information ~~transmitted by~~from the terminal device, wherein the first capability information indicates that the terminal device supports sending ~~and/or receiving~~ first information by using a maximum of a first bandwidth size of bandwidth~~a first quantity of resources~~, and the first information is a sounding reference signal (SRS)~~comprises a reference signal~~;

the second network device is configured to receive second capability information ~~transmitted by~~from the terminal device, wherein the second capability information indicates that the terminal device supports sending ~~and/or receiving~~ second information by using a maximum of a second bandwidth size of bandwidth~~a second quantity of resources~~, and the second information comprises at least one of ~~the following:~~ data or control information;

the first network device is configured to send first configuration information to the terminal device, wherein the first configuration information indicates that a size of bandwidth~~quantity of~~

~~resources~~ configured for the first information is not greater than the first bandwidth size~~quantity~~; and

the second network device is configured to send second configuration information to the terminal device, wherein the second configuration information indicates that a size of bandwidth~~quantity of resources~~ configured for the second information is not greater than the second bandwidth size~~quantity~~.

~~33~~17. A computer-readable storage medium, wherein the storage medium stores at least one instruction, and when the instructions are run on a computer, the computer is enabled to perform the communication method according to any one of claims 1 to ~~1~~6 or claims ~~1~~7 to ~~28~~12.

~~34~~18. A computer program product, wherein the computer program product comprises one or more computer program instructions, and when the computer program instructions are loaded and run on a computer, the computer is enabled to perform the communication method according to any one of claims 1 to ~~1~~6 or claims ~~1~~7 to ~~28~~12.