

first terminal device receives the RRC message sent by the network device, and the RRC message may be used to instruct the first terminal device to transit from the current connected state to the inactive state or the idle state. The first terminal device transits from the connected state to the inactive state or the idle state according to the RRC message. The first terminal device determines the dedicated transmission resource as indicated by the resource configuration information in the RRC message, and uses the dedicated transmission resource to send data using the sidelink. In this way, the terminal device in the inactive state or the idle state may receive the data sent via the sidelink, without interactions with the network device.

[0083] In the embodiment of the present disclosure, the resource configuration information sent by the network device to the first terminal device may further include an identifier of the first terminal device. For example, the network device maintains an index of the terminal device context. The index for the terminal device in the inactive state is unique across multiple network devices. The identifier of the first terminal device may uniquely identify the first terminal device, and the identifier of the first terminal device may indicate that the dedicated transmission resource indicated in the resource configuration information is a resource configured for the first terminal device. According to exemplary embodiments, the first terminal device may also use the identifier as its own identifier, for example as a source address or a destination address in a sidelink transmission. According to exemplary embodiments, the identifier of the first terminal device may be processed, for example, according to a certain Hash algorithm or a truncation algorithm, to generate a short identifier, and the first terminal device is uniquely identified by the truncated identifier. The embodiments of the present disclosure do not impose specific limitations on this.

[0084] As shown in FIG. 1, the method 100 further includes:

[0085] In S120, if the first terminal device is in an inactive state or an idle state, the first terminal device sends data to a second terminal device using the dedicated transmission resource. The second terminal device may be any other terminal device than the first terminal device.

[0086] It should be understood that the dedicated transmission resource configured by the network device for the first terminal device may correspond to only the first terminal device, or may correspond to a terminal device group including the first terminal device. For

to store instructions, and the processor 510 is configured to execute the instructions in the memory 530 to control the transceiver 520 to send information or signals. The transceiver 520 is configured to: if the terminal device 500 is in a connected state, receive resource configuration information sent by a network device. The resource configuration information is used to indicate a dedicated transmission resource. The transceiver 520 is further configured to: if the terminal device 500 is in an inactive state or an idle state, send data to a second terminal device using the dedicated transmission resource.

[00177] The terminal device according to embodiments of the present disclosure receives the dedicated transmission resource allocated by the network device if the terminal device is in the connected state, and uses the dedicated transmission resource to perform data transmission with other terminal devices if the terminal device is in the inactive state or the idle state. In this way, the terminal device can use the dedicated transmission resource configured by the network device even if the terminal device is in the inactive state or the idle state. The embodiments of the present disclosure can reduce energy consumption of the terminal device and enable the terminal device to enjoy the benefits of the dedicated resource.

[00178] According to exemplary embodiments, the transceiver 520 is configured to:

[00179] receive a Radio Resource Control (RRC) message sent by the network device if the terminal device is in the connected state, wherein the RRC message includes the resource configuration information.

[00180] According to exemplary embodiments, the RRC message is used to indicate that the terminal device transits from the connected state to the inactive state or the idle state.

[00181] According to exemplary embodiments, the transceiver 520 is further configured to:

[00182] if the terminal device 500 is in the connected state, receive from the network device receiving resource information, wherein the receiving resource information is used to indicate a receiving resource set; and

[00183] if the terminal device 500 is in the inactive state or the idle state, receive data sent from a third terminal device using a resource in the receiving resource set.

[00184] According to exemplary embodiments, the transceiver 520 is configured to:

[00185] receive RRC signaling or a System Information Block (SIB) sent by the

network device if the terminal device is in the connected state, wherein the RRC signaling and the SIB include the receiving resource information.

[00186] According to exemplary embodiments, the transceiver 520 is configured to:

[00187] receive the SIB periodically broadcast by the network device if the terminal device 500 is in the connected state.

[00188] According to exemplary embodiments, the dedicated transmission resource belongs to the receiving resource set.

[00189] According to exemplary embodiments, the dedicated transmission resource is used for a terminal device group to transmit data, the terminal device group includes at least two terminal devices, and the at least two terminal devices include the terminal device 500.

[00190] According to exemplary embodiments, there is no concurrent data transmission by a plurality of terminal devices in the terminal device group, and only one of the terminal devices in the terminal device group is allowed to send data at a time using the dedicated transmission resource.

[00191] According to exemplary embodiments, a plurality of terminal devices in the terminal device group send data concurrently, and the plurality of terminal devices use different dedicated transmission resources to concurrently send data.

[00192] According to exemplary embodiments, the resource configuration information includes an identifier of the terminal device 500.

[00193] According to exemplary embodiments, the identifier of the terminal device 500 is used to indicate a source address by which the first terminal device sends data to the second terminal device.

[00194] It should be understood that the terminal device 500 according to the embodiments of the present disclosure may correspond to the terminal device 300 in the embodiments of the present disclosure, and may be configured to perform the method 100 according to the embodiments of the present disclosure. The foregoing and other operations and/or functions of respective units in the terminal device 500 are used to implement corresponding processes of the terminal devices in the methods described with reference to FIG. 1 and FIG. 2. For brevity, repeated descriptions are omitted herein.

WHAT IS CLAIMED IS:

1. A resource configuration method, comprising:

if a first terminal device is in a connected state, receiving resource configuration information sent by a network device, wherein the resource configuration information is used to indicate a dedicated transmission resource; and

if the first terminal device is in an inactive state or an idle state, sending data to a second terminal device using the dedicated transmission resource.

2. The method according to claim 1, wherein receiving resource configuration information sent by a network device comprises:

receiving, by the first terminal device, a Radio Resource Control (RRC) message sent by the network device, wherein the RRC message comprises the resource configuration information.

3. The method according to claim 2, wherein the RRC message is used to indicate that the first terminal device transits from the connected state to the inactive state or the idle state.

4. The method according to any one of claims 1 to 3, further comprising:

if the first terminal device is in the connected state, receiving from the network device receiving resource information, wherein the receiving resource information is used to indicate a receiving resource set; and

if the first terminal device is in the inactive state or the idle state, receiving data sent from a third terminal device using a resource in the receiving resource set.

5. The method according to claim 4, wherein receiving from the network device receiving resource information, comprises:

receiving, by the first terminal device, RRC signaling or a System Information Block (SIB) sent by the network device, wherein the RRC signaling and the SIB comprise the receiving resource information.

6. The method according to claim 5, wherein receiving, by the first terminal device, RRC signaling or a SIB sent by the network device comprises:

receiving, by the first terminal device, the SIB periodically broadcast by the network device.

7. The method according to any one of claims 4 to 6, wherein the dedicated transmission resource belongs to the receiving resource set.

8. The method according to any one of claims 1 to 7, wherein the dedicated transmission resource is used for a terminal device group to transmit data, the terminal device group comprises at least two terminal devices, and the at least two terminal devices comprise the first terminal device.

9. The method according to claim 8, wherein there is no concurrent data transmission by a plurality of terminal devices in the terminal device group, and only one of the terminal devices in the terminal device group is allowed to send data at a time using the dedicated transmission resource; or

wherein a plurality of terminal devices in the terminal device group send data concurrently, and the plurality of terminal devices use different dedicated transmission resources to concurrently send data.

10. The method according to any one of claims 1 to 9, wherein the resource configuration information comprises an identifier of the first terminal device.

11. The method according to claim 10, wherein the identifier of the first terminal device is used to indicate a source address by which the first terminal device sends data to the second terminal device.

12. A resource configuration method, comprising:

configuring, by a network device, a dedicated transmission resource for a first terminal

device, wherein the dedicated transmission resource is used by the first terminal device to send data to a second terminal device if the first terminal device is in an inactive state or an idle state; and

sending, by the network device, resource configuration information to the first terminal device which is in a connected state, wherein the resource configuration information is used to indicate the dedicated transmission resource.

13. The method according to claim 12, wherein sending, by the network device, resource configuration information to the first terminal device which is in a connected state, comprises:

sending, by the network device, a Radio Resource Control (RRC) message to the first terminal device which is in the connected state, wherein the RRC message comprises the resource configuration information.

14. The method according to claim 13, wherein the RRC message is used to indicate that the first terminal device transits from the connected state to the inactive state or the idle state.

15. The method according to any one of claims 12 to 14, further comprising:

sending, by the network device, receiving resource information to the first terminal device which is in the connected state, wherein the receiving resource information is used to indicate a receiving resource set, and a resource in the receiving resource set is used for the first terminal device to receive data from a third terminal device if the first terminal device is in the inactive state or the idle state.

16. The method according to claim 15, wherein sending, by the network device, receiving resource information to the first terminal device which is in the connected state, comprises:

sending, by the first terminal device, RRC signaling or a System Information Block (SIB) to the first terminal device which is in the connected state, wherein the RRC signaling and the SIB comprise the receiving resource information.

17. The method according to claim 16, wherein sending, by the first terminal device, RRC signaling or a SIB to the first terminal device which is in the connected state, comprises:

periodically broadcasting the SIB by the network device.

18. The method according to any one of claims 15 to 17, wherein configuring, by a network device, a dedicated transmission resource for a first terminal device, comprises:

determining, by the network device, the dedicated transmission resource from the receiving resource set.

19. A terminal device, configured to perform the method of any one of claims 1-11.

20. A network device, configured to perform the method of any one of claims 12-18.