

Claims

1. A method for transmitting a radio link control (RLC) layer status report protocol data unit (PDU), comprising:

receiving, by a user equipment, configuration information sent by a network device,
5 wherein the configuration information comprises at least one status report PDU format; and

generating a status report PDU according to a status report PDU format selected by the user equipment from the at least one status report PDU format, and reporting the status report PDU,

10 wherein the status report PDU format comprises a maximum sequence number of PDUs successfully received by the user equipment, and the status report PDU format further comprises one or more ranges of sequence numbers of PDUs incorrectly received.

2. The method of claim 1, wherein the range of the sequence numbers comprises a high limit sequence number and a low limit sequence number; and when the maximum sequence number of the PDUs successfully received by the user equipment is adjacent to the high limit
15 sequence number, the status report PDU format comprises the maximum sequence number of the PDUs successfully received by the user equipment and the low limit sequence number.

3. The method of claim 1 or 2, wherein selecting, by the user equipment, the status report PDU format from the at least one status report PDU format, comprises:

20 selecting, by the user equipment, the status report PDU format from the at least one status report PDU format according to a situation of incorrectly receiving PDUs.

4. The method of claim 3, wherein when a quantity of the PDUs incorrectly received by the user equipment is greater than or equal to a preset threshold value, or when the quantity of the PDUs incorrectly received by the user equipment is greater than or equal to the preset threshold value and sequence numbers of the PDUs incorrectly received are continuous, the
25 selected status report PDU format comprises a maximum sequence number of PDUs successfully received by the user equipment and further comprises a range of the sequence numbers of the PDUs incorrectly received.

5. The method of claim 3, wherein when a quantity of the PDUs incorrectly received by

the user equipment is greater than or equal to a preset threshold value and sequence numbers of the PDUs incorrectly received are discontinuous, the selected status report PDU format comprises a maximum sequence number of PDUs successfully received by the user equipment and further comprises a plurality of ranges of the sequence numbers of the PDUs incorrectly received.

6. The method of claim 3, wherein when a quantity of the PDUs incorrectly received by the user equipment is less than a preset threshold value, the selected status report PDU format comprises a maximum sequence number of PDUs successfully received by the user equipment and further comprises a sequence number of each PDU incorrectly received.

7. A method for transmitting a radio link control (RLC) layer status report control protocol data unit (PDU), comprising:

generating, by a network device, configuration information, wherein the configuration information comprises at least one status report PDU format;

sending, by the network device, the configuration information to a user equipment; and

receiving, by the network device, a status report PDU reported by the user equipment, wherein the status report PDU is generated through a status report PDU format selected by the user equipment from the at least one status report PDU format,

wherein the status report PDU format comprises a maximum sequence number of PDUs successfully received by the user equipment, and the status report PDU format further comprises one or more ranges of sequence numbers of PDUs incorrectly received.

8. The method of claim 7, wherein the range of the sequence numbers comprises a high limit sequence number and a low limit sequence number; and when the maximum sequence number of the PDUs successfully received by the user equipment is adjacent to the high limit sequence number, the status report PDU format comprises the maximum sequence number of the PDUs successfully received by the user equipment and the low limit sequence number.

9. A user equipment, comprising:

a receiving module, configured to receive configuration information sent by a network device, wherein the configuration information comprises at least one status report PDU format;

a processing module, configured to generate a status report PDU according to a status report PDU format selected from the at least one status report PDU format; and

a sending module, configured to report the status report PDU,

5 wherein the status report PDU format comprises a maximum sequence number of PDUs successfully received by the user equipment, and the status report PDU format further comprises one or more ranges of sequence numbers of PDUs incorrectly received.

10 10. The user equipment of claim 9, wherein the range of the sequence numbers comprises a high limit sequence number and a low limit sequence number; and when the maximum sequence number of the PDUs successfully received by the user equipment is adjacent to the high limit sequence number, the status report PDU format comprises the maximum sequence number of the PDUs successfully received by the user equipment and the low limit sequence number.

11. The user equipment of claim 9 or 10, wherein the processing module is specifically configured to:

15 select the status report PDU format from the at least one status report PDU format according to a situation of incorrectly receiving PDUs.

20 12. The user equipment of claim 11, wherein when a quantity of the PDUs incorrectly received by the user equipment is greater than or equal to a preset threshold value, or when the quantity of the PDUs incorrectly received by the user equipment is greater than or equal to the preset threshold value and sequence numbers of the PDUs incorrectly received are continuous, the selected status report PDU format comprises a maximum sequence number of PDUs successfully received by the user equipment and further comprises a range of the sequence numbers of the PDU incorrectly received.

25 13. The user equipment of claim 11, wherein when a quantity of the PDUs incorrectly received by the user equipment is greater than or equal to a preset threshold value and sequence numbers of the PDUs incorrectly received are discontinuous, the selected status report PDU format comprises a maximum sequence number of PDUs successfully received by the user equipment and further comprises a plurality of ranges of the sequence numbers of the PDUs incorrectly received.

14. The user equipment of claim 11, wherein when a quantity of the PDUs incorrectly received by the user equipment is less than a preset threshold value, the selected status report PDU format comprises a maximum sequence number of PDUs successfully received by the user equipment and further comprises a sequence number of each PDU incorrectly received.

5 15. A network device, comprising:

a processing module, configured to generate configuration information, wherein the configuration information comprises at least one status report PDU format;

a sending module, configured to send the configuration information to a user equipment;
and

10 a receiving module, configured to receive a status report PDU reported by the user equipment, wherein the status report PDU is generated through a status report PDU format selected by the user equipment from the at least one status report PDU format,,

wherein the status report PDU format comprises a maximum sequence number of PDUs successfully received by the user equipment, and the status report PDU format further
15 comprises one or more ranges of sequence numbers of PDUs incorrectly received.

16. The network device of claim 15, wherein the range of the sequence numbers comprises a high limit sequence number and a low limit sequence number; and when the maximum sequence number of the PDUs successfully received by the user equipment is adjacent to the high limit sequence number, the status report PDU format comprises the
20 maximum sequence number of the PDUs successfully received by the user equipment and the low limit sequence number.

17. A user equipment, comprising a processor, a memory, a transceiver and a bus;
wherein

the processor is connected with the memory and the transceiver through the bus and
25 completes communication among the processor, the memory, and the transceiver;

the memory stores executable program codes, and the processor is used for calling the executable program codes stored in the memory to execute the method of any one of claims 1 to 6.

18. A network device, comprising a processor, a memory, a transceiver and a bus;
wherein

the processor is connected with the memory and the transceiver through the bus and
completes communication among the processor, the memory, and the transceiver;

5 the memory stores executable program codes, and the processor is used for calling the
executable program codes stored in the memory to execute the method of claim 7 or 8.