WHAT IS CLAIMED IS:

1. A sidelink transmission method, comprising:

receiving, by a terminal, downlink information, wherein the downlink information is configured to indicate resource grant of a sidelink; and

controlling, by the terminal, a state of a timer related to discontinuous reception (DRX) for the sidelink based on a first event.

2. The method of claim 1, wherein the downlink information is carried by a Physical Downlink Control Channel (PDCCH).

3. The method of claim 1 or 2, wherein the timer related to the DRX comprises at least one of a round-trip time (RTT) timer or a retransmission timer.

4. The method of any one of claims 1 to 3, wherein controlling the state of the timer related to the DRX for the sidelink comprises at least one of following operations:

starting the RTT timer for the sidelink; or

in response to expiration of the RTT timer, starting the retransmission timer for the sidelink.

5. The method of any one of claims 1 to 3, wherein controlling the state of the timer related to the DRX for the sidelink comprises:

starting the retransmission timer for the sidelink.

6. The method of any one of claims 1 to 5, wherein the first event comprises:

receiving, by the terminal, a Physical Downlink Control Channel (PDCCH) comprising the downlink information.

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

transmitting, by the terminal, a Physical Sidelink Shared Channel (PSSCH).

8. The method of any one of claims 1 to 7, wherein the first event comprises:

transmitting, by the terminal, a Physical Uplink Control Channel (PUCCH).

9. The method of any one of claims 6 to 8, wherein the method is performed in at least one of following conditions: the PUCCH having been configured, or the PUCCH not being configured.

10. The method of any one of claims 1 to 9, wherein the first event has an association relationship with the conditions for performing the method.

11. A sidelink transmission method, comprising:

receiving, by a terminal, sidelink information, wherein the sidelink information is configured to indicate resource grant of a sidelink; and

controlling, by the terminal, a state of a timer related to discontinuous reception (DRX) for the sidelink based on a first event.

12. The method of claim 11, wherein the sidelink information is carried by a Physical Sidelink Control Channel (PSCCH).

13. The method of claim 11 or 12, wherein the timer related to the DRX comprises at least one of a round-trip time (RTT) timer or a retransmission timer.

14. The method of any one of claims 11 to 13, wherein controlling the state of the timer related to the DRX for the sidelink comprises at least one of following operations:

starting the RTT timer for the sidelink; or

in response to expiration of the RTT timer, starting the retransmission timer for the sidelink.

15. The method of claim 14, wherein controlling the state of the timer related to the DRX for the sidelink comprises:

stopping a running retransmission timer for the sidelink.

16. The method of any one of claims 11 to 15, wherein the first event comprises:

receiving, by the terminal, a Physical Sidelink Shared Channel (PSSCH).

17. The method of any one of claims 11 to 16, wherein the first event comprises:

transmitting, by the terminal, a Physical Sidelink Feedback Channel (PSFCH).

18. The method of claim 16 or 17, wherein the method is performed in at least one of following conditions: the PSFCH having been configured, the PSFCH having been used, the PSFCH not being configured, or the PSFCH not being used.

19. The method of any one of claims 11 to 18, wherein the first event has an association relationship with the conditions for performing the method.

20. A terminal, comprising a processor and a memory, wherein the memory is configured to store a computer program, and the processor is configured to call and run the computer program stored in the memory to execute the method of any one of claims 1 to 19.