

CLAIMS

1. A method for capability and resource allocation for a sidelink, wherein the method is performed by a terminal device and comprises:

obtaining information related to sidelink transmission, wherein the related information comprises information about maximum processing capabilities and/or information about maximum allocable resources of the terminal device; and

performing transmission configuration;

wherein the performing transmission configuration comprises:

when establishing a connection for the sidelink transmission, negotiating related information used for the sidelink transmission;

wherein the related information comprises at least one of the following:

a quantity of HARQ processes;

target information to be monitored or detected, wherein the target information comprises at least one of sidelink control information SCI, a control channel, and a control channel candidate;

a supported quantity of transmit/receive antennas;

a supported transmission mode.

2. The method according to claim 1, wherein the related information further comprises at least one of the following:

a quantity of hybrid automatic repeat request HARQ entities;

a buffer size;

a supported data rate;

transmit power;

a supported quantity of transmit/receive carriers;

a supported quantity of transmit/receive beams;

a supported quantity of transmit/receive resource pools;

a quantity of sidelink connections; and

a quantity of monitored or demodulated subcarrier spacings SCSs.

3. The method according to claim 1 or 2, wherein the performing transmission configuration comprises at least one of the following:

performing transmission configuration between different transmission modes of the sidelink transmission;

performing transmission configuration between different transmit/receive beams of the sidelink transmission;

performing transmission configuration between different transmission types of the sidelink transmission;

performing transmission configuration between different resource pools of the sidelink transmission;

performing transmission configuration between different services of the sidelink transmission; and

performing transmission configuration in different connection statuses of the sidelink transmission.

4. The method according to claim 1, wherein the performing transmission configuration further comprises at least one of the following:

when transmitting data on the sidelink, allocating related information used for the sidelink transmission; and

in a connection process of the sidelink transmission, managing related information used for the sidelink transmission.

5. The method according to claim 1, further comprising:

transmitting the related information to a network device, so that the network device performs transmission configuration or scheduling; or

transmitting the related information to a target terminal device, so that the target terminal device performs transmission configuration or scheduling.

6. The method according to claim 1, wherein the negotiating related information used for the sidelink transmission comprises:

transmitting the related information used for the sidelink transmission.

7. The method according to claim 1, wherein the negotiating related information used for the sidelink transmission comprises:

receiving request information used for establishing a sidelink connection for the sidelink transmission, wherein the request information comprises related information that a peer device suggests for the sidelink transmission; and

responding to the request information.

8. The method according to claim 7, wherein the responding to the request information comprises:

refusing to reestablish a sidelink connection to the peer device; or

establishing a sidelink connection to the peer device.

9. The method according to claim 1, wherein the performing transmission configuration comprises:

when establishing a connection for the sidelink transmission, or when transmitting data on the sidelink, determining, based on first target quality of service information and/or radio resource information, related information used for the sidelink transmission.

10. The method according to claim 4, wherein the managing related information used for the sidelink transmission comprises:

activating or deactivating all the related information used for the sidelink transmission; or

activating or deactivating a part of the related information used for the sidelink transmission; or

reallocating or renegotiating related information used for the sidelink transmission.

11. The method according to claim 10, wherein the reallocating or renegotiating related information used for the sidelink transmission comprises:

reallocating or renegotiating, based on at least one of service requirement information and second target quality of service information, the related information used for the sidelink transmission.

12. The method according to claim 3, wherein

the processing capabilities and resources in related information used for transmission under different transmission types and/or different connection statuses are not beyond the maximum processing capabilities and the maximum allocable resources of the terminal device.

13. A method for capability and resource allocation for a sidelink, wherein the method is performed by a control device and comprises:

receiving information related to sidelink transmission, wherein the related information comprises information about maximum processing capabilities and/or information about maximum allocable resources of a terminal device; and

performing transmission configuration or scheduling for the terminal device;

wherein the performing transmission configuration comprises at least one of the following:
when establishing a connection for the sidelink transmission, negotiating related information used for the sidelink transmission;

wherein the related information comprises at least one of the following:

a quantity of HARQ processes;

target information to be monitored or detected, wherein the target information comprises at least one of sidelink control information SCI, a control channel, and a control channel candidate;

a supported quantity of transmit/receive antennas;

a supported transmission mode.

14. The method according to claim 13, wherein the related information further comprises at least one of the following:

a quantity of hybrid automatic repeat request HARQ entities;

a buffer size;

a supported data rate;

transmit power;

a supported quantity of transmit/receive carriers;

a supported quantity of transmit/receive beams;

a supported quantity of transmit/receive resource pools;

a quantity of sidelink connections; and

a quantity of monitored or demodulated subcarrier spacings SCSs.

15. A terminal device, comprising:

an obtaining module, configured to obtain information related to sidelink transmission, wherein the related information comprises information about maximum processing capabilities and/or information about maximum allocable resources of the terminal device; and

a transmission configuration module, configured to perform transmission configuration;

wherein the performing transmission configuration comprises at least one of the following:

when establishing a connection for the sidelink transmission, negotiating related information used for the sidelink transmission;

wherein the related information comprises at least one of the following:

a quantity of HARQ processes;

target information to be monitored or detected, wherein the target information comprises at least one of sidelink control information SCI, a control channel, and a control channel candidate;

a supported quantity of transmit/receive antennas;

a supported transmission mode.

16. The terminal device according to claim 15, wherein the related information further comprises at least one of the following:

a quantity of hybrid automatic repeat request HARQ entities;

a buffer size;

a supported data rate;

transmit power;

a supported quantity of transmit/receive carriers;

a supported quantity of transmit/receive beams;

a supported quantity of transmit/receive resource pools;

a quantity of sidelink connections; and

a quantity of monitored or demodulated subcarrier spacings SCSs.

17. The terminal device according to claim 15, wherein the performing transmission configuration further comprises at least one of the following:

when transmitting data on the sidelink, allocating related information used for the sidelink transmission; and

in a connection process of the sidelink transmission, managing related information used for the sidelink transmission.

18. The terminal device according to claim 15, further comprises a transmission module, configured to:

transmit the related information to a network device, so that the network device performs transmission configuration or scheduling; or

transmit the related information to a target terminal device, so that the target terminal device performs transmission configuration or scheduling.

19. A control device, comprising:

a receiving module, configured to receive information related to sidelink transmission, wherein the related information comprises information about maximum processing capabilities and/or information about maximum allocable resources of a terminal device; and

a transmission configuration module, configured to perform transmission configuration or scheduling for the terminal device;

wherein the performing transmission configuration comprises at least one of the following:

when establishing a connection for the sidelink transmission, negotiating related information used for the sidelink transmission;

wherein the related information comprises at least one of the following:

a quantity of HARQ processes;

target information to be monitored or detected, wherein the target information comprises at least one of sidelink control information SCI, a control channel, and a control channel candidate;

a supported quantity of transmit/receive antennas;

a supported transmission mode.

20. The control device according to claim 19, wherein the related information further comprises at least one of the following:

a quantity of hybrid automatic repeat request HARQ entities;

a buffer size;

a supported data rate;

transmit power;

a supported quantity of transmit/receive carriers;

a supported quantity of transmit/receive beams;

a supported quantity of transmit/receive resource pools;

a quantity of sidelink connections; and

a quantity of monitored or demodulated subcarrier spacings SCSs.