CLAIMS

What is claimed is:

1. A communication method, comprising:

determining, by a first sidelink device, first indication information and first sidelink resource information, wherein the first indication information indicates that the first sidelink resource information comprises auxiliary information; and

sending, by the first sidelink device, the first indication information and the first sidelink resource information to a second sidelink device, wherein

the auxiliary information is used to assist the second sidelink device in resource selection;

wherein the first sidelink resource information further comprises reservation information, and the reservation information indicates a resource reserved by the first sidelink device;

wherein the sending, by the first sidelink device, the first indication information and the first sidelink resource information to a second sidelink device comprises: sending, by the first sidelink device, the first sidelink resource information in a first time window; and

the first time window comprises a plurality of timeslots, and the first sidelink resource information comprises the reservation information sent in a first timeslot and the auxiliary information sent in a second timeslot,

wherein the first timeslot is earlier than the second timeslot in terms of time.

2. The method according to claim 1, wherein

a value of the first indication information is a first value, and the first value indicates that the first sidelink resource information is the auxiliary information.

3. The method according to claim 1, wherein

the value of the first indication information is a second value, and the second value indicates that the first sidelink resource information comprises the auxiliary information and the reservation information.

4. The method according to claim 1 or 3, wherein

the first sidelink resource information comprises the reservation information sent in one first timeslot and the auxiliary information sent in one or more second timeslots; or

the first sidelink resource information comprises the reservation information sent in a plurality of first timeslots and the auxiliary information sent in one second timeslot.

5. The method according to claim 1 or 4, wherein

the first sidelink device sends second indication information to the second sidelink device, wherein the second indication information indicates the reservation information sent in the first timeslot and the auxiliary information sent in the second timeslot.

6. The method according to claim 5, wherein

the first time window comprises M timeslots, and M is an integer greater than or equal to 3; and

a value of the second indication information is a first value, and the first value indicates that the first sidelink device is to send the reservation information in an n^{th} timeslot of the first time window, send the auxiliary information in an $(n+G1)^{th}$ timeslot, and send the auxiliary information in an $(n+G2)^{th}$ timeslot, where n, G1, and G2 are all integers; or

a value of the second indication information is a second value, and the second value indicates that the first sidelink device is to send the auxiliary information in an n^{th} timeslot of the first time window, send the reservation information in an $(n-G3)^{th}$ timeslot, and send the auxiliary information in an $(n+G4)^{th}$ timeslot, where n, G3, and G4 are all integers; or

a value of the second indication information is a third value, and the third value indicates that the first sidelink device is to send the auxiliary information in an n^{th} timeslot of the first time window, send the auxiliary information in an $(n-G5)^{th}$ timeslot, and send the reservation information in an $(n-G6)^{th}$ timeslot, where n, G5, and G6 are all integers.

7. The method according to any one of claims 1 to 6, wherein

the auxiliary information comprises a result of measuring a resource in a resource pool by the first sidelink device.

8. The method according to any one of claims 1 to 7, wherein

the first indication information and/or the first sidelink resource information is in sidelink control information SCI.

9. The method according to claim 8, wherein

the sidelink control information SCI comprises first-stage SCI and/or second-stage SCI; and

the first-stage SCI comprises the first indication information and/or the first sidelink resource information.

10. The method according to claim 9, wherein

the first indication information comprises a reserved bit or a reserved field in the first-stage

SCI;

the first indication information comprises an unused code point in an MCS field in the first-stage SCI; or

the first indication information comprises an unused code point in a period field in the first-stage SCI.

11. The method according to claim 1, wherein

a value of the first indication information is within a first value range, and the first indication information indicates that the first sidelink resource information comprises the auxiliary information.

12. The method according to claim 11, wherein

the first indication information is a field, and the field comprises a source ID and/or a destination ID in second-stage SCI.

13. The method according to any one of claims 1 to 12, wherein

the auxiliary information is information about an auxiliary resource, and the auxiliary resource comprises at least one of the following resources:

a resource reserved by the first sidelink device for the second sidelink device, and a resource excluded by the first sidelink device for the second sidelink device.

14. The method according to claim 13, wherein

the value of the first indication information is a third value, and the third value indicates that the first sidelink resource information comprises the reservation information and the auxiliary information; and

the auxiliary resource is adjacent to a resource reserved by the first sidelink device in frequency domain.

15. The method according to claim 14, wherein

the sidelink control information SCI comprises the first-stage SCI and the second-stage SCI, the first-stage SCI comprises the reservation information, and the second-stage SCI comprises the auxiliary information.

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

the determining, by the first sidelink device, the first sidelink resource information comprises: determining, by the first sidelink device, the auxiliary information based on a first priority; and

the first priority is the same as a service priority of the first sidelink device or a service priority

of the second sidelink device.

17. The method according to claim 16, further comprising:

determining the first priority based on first information, wherein the first information comprises indication signaling in the resource pool.

18. The method according to claim 16, comprising

determining the first priority based on second information, wherein the second information comprises a result of measuring channel quality ment performed by the first sidelink device, wherein

the channel quality is less than or equal to a first threshold, and the first priority is the same as a higher priority in the service priority of the first sidelink device and the service priority of the second sidelink device; or

the channel quality is greater than or equal to a first threshold, and the first priority is the same as a lower priority in the service priority of the first sidelink device and the service priority of the second sidelink device.

19. A sidelink device, comprising:

a processing module, configured to determine first indication information and first sidelink resource information, wherein the first indication information indicates that the first sidelink resource information comprises auxiliary information; and

a transceiver module, configured to send the first indication information and the first sidelink resource information to a second sidelink device, wherein

the auxiliary information is used to assist the second sidelink device in resource selection;

wherein the first sidelink resource information further comprises reservation information, and the reservation information indicates a resource reserved by the first sidelink device;

wherein the transceiver module is configured to send the first sidelink resource information to the second sidelink device in a first time window; and

the first time window comprises a plurality of timeslots, and the first sidelink resource information comprises the reservation information sent in a first timeslot and the auxiliary information sent in a second timeslot,

wherein the first timeslot is earlier than the second timeslot in terms of time.

20. The sidelink device according to claim 19, wherein

a value of the first indication information is a first value, and the first value indicates that the

first sidelink resource information is the auxiliary information.

21. The sidelink device according to claim 19, wherein

the value of the first indication information is a second value, and the second value indicates that the first sidelink resource information comprises the auxiliary information and the reservation information.

22. The sidelink device according to claim 19 or 21, wherein

the first sidelink resource information comprises the reservation information sent in one first timeslot and the auxiliary information sent in one or more second timeslots; or

the first sidelink resource information comprises the reservation information sent in a plurality of first timeslots and the auxiliary information sent in one second timeslot.

23. The sidelink device according to claim 19 or 22, wherein

the transceiver module sends second indication information to the second sidelink device, wherein the second indication information indicates the reservation information sent in the first timeslot and the auxiliary information sent in the second timeslot.

24. The sidelink device according to claim 23, wherein

the first time window comprises M timeslots, and M is an integer greater than or equal to 3; and

a value of the second indication information is a first value, and the first value indicates that the transceiver module is to send the reservation information in an n^{th} timeslot of the first time window, send the auxiliary information in an $(n+G1)^{th}$ timeslot, and send the auxiliary information in an $(n+G2)^{th}$ timeslot, where n, G1, and G2 are all integers; or

a value of the second indication information is a second value, and the second value indicates that the transceiver module is to send the auxiliary information in an n^{th} timeslot of the first time window, send the reservation information in an $(n-G3)^{th}$ timeslot, and send the auxiliary information in an $(n+G4)^{th}$ timeslot, where n, G3, and G4 are all integers; or

a value of the second indication information is a third value, and the third value indicates that the transceiver module is to send the auxiliary information in an n^{th} timeslot of the first time window, send the auxiliary information in an $(n-G5)^{th}$ timeslot, and send the reservation information in an $(n-G6)^{th}$ timeslot, where n, G5, and G6 are all integers.

25. The sidelink device according to any one of claims 19 to 24, wherein

the auxiliary information comprises a result of measuring a resource in a resource pool by the

sidelink device.

26. The sidelink device according to any one of claims 19 to 25, wherein

the first indication information and/or the first sidelink resource information is in sidelink control information SCI.

27. The sidelink device according to claim 26, wherein

the sidelink control information SCI comprises first-stage SCI and/or second-stage SCI; and

the first-stage SCI comprises the first indication information and/or the first sidelink resource information.

28. The sidelink device according to claim 27, wherein

the first indication information comprises a reserved bit or a reserved field in the first-stage SCI;

the first indication information comprises an unused code point in an MCS field in the first-stage SCI; or

the first indication information comprises an unused code point in a period field in the first-stage SCI.

29. The sidelink device according to claim 19, wherein

a value of the first indication information is within a first value range, and the first indication information indicates that the first sidelink resource information comprises the auxiliary information.

30. The sidelink device according to claim 29, wherein

the first indication information is a field, and the field comprises a source ID and/or a destination ID in second-stage SCI.

31. The sidelink device according to any one of claims 19 to 30, wherein

the auxiliary information is information about an auxiliary resource, and the auxiliary resource comprises at least one of the following resources:

a resource reserved by the sidelink device for the second sidelink device, and a resource excluded by the sidelink device for the second sidelink device.

32. The sidelink device according to claim 31, wherein

the value of the first indication information is a third value, and the third value indicates that the first sidelink resource information comprises the reservation information and the auxiliary information; and

the auxiliary resource is adjacent to a resource reserved by the sidelink device in frequency domain.

33. The sidelink device according to claim 32, wherein

the sidelink control information SCI comprises the first-stage SCI and the second-stage SCI, the first-stage SCI comprises the reservation information, and the second-stage SCI comprises the auxiliary information.

34. The sidelink device according to any one of claims 19 to 33, wherein

that the processing module is configured to determine the first sidelink resource information comprises: determining, by the processing module, the auxiliary information based on a first priority; and

the first priority is the same as a service priority of the sidelink device or a service priority of the second sidelink device.

35. The sidelink device according to claim 34, wherein:

the processing module is configured to determine the first priority based on first information, wherein the first information comprises indication signaling in the resource pool.

36. The sidelink device according to claim 34, wherein

the processing module is configured to determine the first priority based on second information, wherein the second information comprises a result of measuring channel quality by the sidelink device; and

the channel quality is less than or equal to a first threshold, and the first priority is the same as a higher priority in the service priority of the sidelink device and the service priority of the second sidelink device; or

the channel quality is greater than or equal to a first threshold, and the first priority is the same as a lower priority in the service priority of the sidelink device and the service priority of the second sidelink device.

37. A sidelink device, comprising:

a transceiver module, configured to receive first indication information and first sidelink resource information sent by a first sidelink device, wherein

the first indication information indicates that the first sidelink resource information comprises auxiliary information; and

the auxiliary information is used to assist the sidelink device in resource selection; and

a processing module, configured to select a resource based on the first indication information and the auxiliary information;

wherein the first sidelink resource information further comprises reservation information, and the reservation information indicates a resource reserved by the first sidelink device;

wherein the first sidelink device is configured to send the first sidelink resource information to the transceiver module within a first time window.; and

the first time window comprises a plurality of timeslots, and the first sidelink resource information comprises the reservation information sent in a first timeslot and the auxiliary information sent in a second timeslot,

wherein the first timeslot is earlier than the second timeslot in terms of time.

38. A communication apparatus, comprising:

a transceiver and a processor, wherein the transceiver is configured to execute instructions for receiving and sending information; and when the instructions are run by the processor, the communication apparatus is enabled to perform the method according to any one of claims 1 to 18.

39. A computer-readable storage medium, wherein

the computer-readable storage medium stores a computer program, and the program is executed by a processor to perform the method according to any one of claims 1 to 18.

40. A communication apparatus, comprising a memory and a processor, wherein the memory is configured to store instructions, and the processor is configured to: execute the instructions stored in the memory to perform the method according to any one of claims 1 to 18.

41. A communication system, comprising the sidelink device according to any one of claims 19 to 36 and the sidelink device according to claim 37.