CLAIMS

What is claimed is:

1. An information transmission method, wherein the method comprises:

receiving first configuration information from a second device, wherein the first configuration information instructs the second device to configure T uplink carriers for a first device, at least one element in a value set of T is a positive integer greater than L, and L is a maximum quantity of uplink carriers on which the first device can simultaneously perform uplink transmission;

determining N uplink carriers from the T uplink carriers, wherein N is a positive integer less than or equal to L; and

sending information on the N uplink carriers,

wherein the method further comprises:

reporting first capability information to the second device, wherein

the first capability information indicates that the first device can determine, from uplink carriers whose quantity is greater than L, an uplink carrier used for sending information; and/or

the first capability information indicates that the first device can support determining, from a maximum of S uplink carriers, an uplink carrier used for sending information, and at least one element in a value set of S is a positive integer greater than L.

2. The method according to claim 1, wherein the method further comprises:

receiving second configuration information from the second device, wherein the second configuration information instructs the second device to configure J downlink carriers for the first device, at least one element in a value set of J is a positive integer greater than K, and K is a maximum quantity of downlink carriers on which the first device can simultaneously perform downlink reception;

determining W downlink carriers from the J downlink carriers, wherein W is a positive integer less than or equal to K; and

receiving information on the W downlink carriers.

3. The method according to claim 2, wherein the method further comprises:

sending second capability information to the second device, wherein

the second capability information indicates that the first device can determine, from downlink carriers whose quantity is greater than K, a downlink carrier used for receiving information; and/or

the second capability information indicates that the first device can determine, from a maximum of V downlink carriers, a downlink carrier used for receiving information, and at least one element in a value set of V is a positive integer greater than K; and/or

the second capability information indicates K.

4. The method according to any one of claims 1 to 3, wherein the determining N uplink carriers from the T uplink carriers comprises:

receiving third configuration information from the second device, wherein the third configuration information indicates an uplink carrier enabled by the second device for the first device and/or a quantity of uplink carriers enabled by the second device for the first device, and the quantity of uplink carriers enabled by the second device for the first device can be greater than L; and

determining the N uplink carriers from uplink carriers enabled by the second device for the first device.

5. The method according to claim 2 or claim 3 or according to claim 4 when dependent on claim 2 or 3, wherein the determining W downlink carriers from the J downlink carriers comprises:

receiving fourth configuration information from the second device, wherein the fourth configuration information indicates a downlink carrier enabled by the second device for the first device and/or a quantity of downlink carriers enabled by the second device for the first device, and the quantity of downlink carriers enabled by the second device for the first device can be greater than K; and

determining the W downlink carriers from downlink carriers enabled by the second device for the first device.

6. The method according to any one of claims 1 to 5, wherein T is greater than J, and J is a quantity of downlink carriers configured by the second device for the first device; and/or

L is greater than K, and K is a maximum quantity of downlink carriers on which the first device can simultaneously perform downlink reception.

7. The method according to any one of claims 1 to 6, wherein the T uplink carriers are used for uplink carrier switching.

8. The method according to any one of claims 1 to 7, wherein the N uplink carriers are determined based on received downlink control information sent by the second device to the first device.

9. An information transmission method, wherein the method comprises:

sending first configuration information to a first device, wherein the first configuration information instructs a second device to configure T uplink carriers for the first device, at least one element in a value set of T is a positive integer greater than L, and L is a maximum quantity of uplink carriers on which the first device can simultaneously perform uplink transmission; and

determining N uplink carriers from the T uplink carriers, wherein N is a positive integer less than or equal to L, and the N uplink carriers are used for receiving information from the first device,

wherein the method further comprises:

receiving first capability information from the first device; and

determining, based on the first capability information, that the first device can determine, from uplink carriers whose quantity is greater than L, an uplink carrier used for sending information; and/or

determining, based on the first capability information, that the first device can support determining, from a maximum of S uplink carriers, an uplink carrier used for sending information, and at least one element in a value set of S is a positive integer greater than L.

10. The method according to claim 9, wherein the method further comprises:

sending second configuration information to the first device, wherein the second configuration information instructs the second device to configure J downlink carriers for the first device, at least one element in a value set of J is a positive integer greater than K, and K is a maximum quantity of downlink carriers on which the first device can simultaneously perform downlink reception; and

determining W downlink carriers from the J downlink carriers, wherein W is a positive integer less than or equal to K, and the W downlink carriers are used for sending information.

11. The method according to claim 10, wherein the method further comprises:

receiving second capability information from the first device; and

determining, based on the second capability information, that the first device can determine, from downlink carriers whose quantity is greater than K, a downlink carrier used for receiving information; and/or

determining, based on the second capability information, that the first device can determine, from a maximum of V downlink carriers, a downlink carrier used for receiving information, and at least one element in a value set of V is a positive integer greater than K; and/or

determining K based on the second capability information.

12. The method according to any one of claims 8 to 11, wherein the method further comprises:

sending third configuration information to the first device, wherein the third configuration information indicates an uplink carrier enabled by the second device for the first device and/or a quantity of uplink carriers enabled by the second device for the first device, and the quantity of uplink carriers enabled by the second device for the first device can be greater than L.

13. The method according to any one of claims 9 to 12, wherein the method further comprises:

sending fourth configuration information to the first device, wherein the fourth configuration information indicates a downlink carrier enabled by the second device for the first device and/or a quantity of downlink carriers enabled by the second device for the first device, and the quantity of downlink carriers enabled by the second device for the first device can be greater than K.

14. The method according to any one of claims 9 to 13, wherein T is greater than J, and J is a quantity of downlink carriers configured by the second device for the first device; and/or

L is greater than K, and K is a maximum quantity of downlink carriers on which the first device can simultaneously perform downlink reception.

15. The method according to any one of claims 9 to 14, wherein the T uplink carriers are used for uplink carrier switching.

16. The method according to any one of claims 9 to 15, wherein the N uplink carriers are determined based on received downlink control information sent by the second device to the first device.

17. A communication apparatus, wherein the communication apparatus comprises:

a transceiver module, configured to receive first configuration information from a second device, wherein the first configuration information instructs the second device to configure T uplink carriers for the first device, at least one element in a value set of T is a positive integer greater than L, and L is a maximum quantity of uplink carriers on which the first device can simultaneously perform uplink transmission;

a processing module, configured to determine N uplink carriers from the T uplink carriers, wherein N is a positive integer less than or equal to L; and

the transceiver module, configured to send information on the N uplink carriers,

wherein the transceiver module is configured to report first capability information to the second device, wherein

the first capability information indicates that the first device can determine, from uplink carriers whose quantity is greater than L, an uplink carrier used for sending information; and/or

the first capability information indicates that the first device can support determining, from a maximum of S uplink carriers, an uplink carrier used for sending information, and at least one element in a value set of S is a positive integer greater than L.

18. The communication apparatus according to claim 17, wherein the transceiver module is configured to receive second configuration information from the second device, wherein the second configuration information instructs the second device to configure J downlink carriers for the first device, at least one element in a value set of J is a positive integer greater than K, and K is a maximum quantity of downlink carriers on which the first device can simultaneously perform downlink reception;

the processing module is configured to determine W downlink carriers from the J downlink carriers, wherein W is a positive integer less than or equal to K; and

the transceiver module is configured to receive information on the W downlink carriers.

19. The communication apparatus according to claim 18, wherein the transceiver module is configured to send second capability information to the second device, wherein

the second capability information indicates that the first device can determine, from downlink carriers whose quantity is greater than K, a downlink carrier used for receiving information; and/or

the second capability information indicates that the first device can determine, from a maximum of V downlink carriers, a downlink carrier used for receiving information, and at least one element in a value set of V is a positive integer greater than K; and/or

the second capability information indicates K.

20. The communication apparatus according to any one of claims 17 to 19, wherein the transceiver module is configured to receive third configuration information from the second device, wherein the third configuration information indicates an uplink carrier enabled by the second device for the first device and/or a quantity of uplink carriers enabled by the second device for the first device, and the quantity of uplink carriers enabled by the second device for the first device can be greater than L; and

the processing module is configured to determine the N uplink carriers from uplink carriers enabled by the second device for the first device.

21. The communication apparatus according to claim 18 or claim 19 or according to claim 20

when dependent on claim 18 or 19, wherein the transceiver module is configured to receive fourth configuration information from the second device, wherein the fourth configuration information indicates a downlink carrier enabled by the second device for the first device and/or a quantity of downlink carriers enabled by the second device for the first device, and the quantity of downlink carriers enabled by the second device for the first device can be greater than K; and

the processing module is configured to determine the W downlink carriers from downlink carriers enabled by the second device for the first device.

22. The communication apparatus according to any one of claims 17 to 21, wherein T is greater than J, and J is a quantity of downlink carriers configured by the second device for the first device; and/or

L is greater than K, and K is a maximum quantity of downlink carriers on which the first device can simultaneously perform downlink reception.

23. The communication apparatus according to any one of claims 17 to 22, wherein the T uplink carriers are used for uplink carrier switching.

24. The communication apparatus according to any one of claims 17 to 23, wherein the N uplink carriers are determined based on received downlink control information sent by the second device to the first device.

25. A communication apparatus, wherein the communication apparatus comprises:

a transceiver module, configured to send first configuration information to a first device, wherein the first configuration information instructs the second device to configure T uplink carriers for the first device, at least one element in a value set of T is a positive integer greater than L, and L is a maximum quantity of uplink carriers on which the first device can simultaneously perform uplink transmission; and

a processing module, configured to determine N uplink carriers from the T uplink carriers, wherein N is a positive integer less than or equal to L, and the N uplink carriers are used for receiving information from the first device,

wherein the transceiver module is configured to receive first capability information from the first device; and

the processing module is configured to determine, based on the first capability information, that the first device can determine, from uplink carriers whose quantity is greater than L, an uplink carrier used for sending information; and/or determine, based on the first capability information,

that the first device can support determining, from a maximum of S uplink carriers, an uplink carrier used for sending information, and at least one element in a value set of S is a positive integer greater than L.

26. The communication apparatus according to claim 25, wherein the transceiver module is configured to send second configuration information to the first device, wherein the second configuration information instructs the second device to configure J downlink carriers for the first device, at least one element in a value set of J is a positive integer greater than K, and K is a maximum quantity of downlink carriers on which the first device can simultaneously perform downlink reception; and

the processing module is configured to determine W downlink carriers from the J downlink carriers, wherein W is a positive integer less than or equal to K, and the W downlink carriers are used for sending information.

27. The communication apparatus according to claim 26, wherein the transceiver module is configured to receive second capability information from the first device; and

the processing module is configured to determine, based on the second capability information, that the first device can determine, from downlink carriers whose quantity is greater than K, a downlink carrier used for receiving information; and/or determine, based on the second capability information, that the first device can determine, from a maximum of V downlink carriers, a downlink carrier used for receiving information, and at least one element in a value set of V is a positive integer greater than K; and/or determine K based on the second capability information.

28. The communication apparatus according to any one of claims 25 to 27, wherein the transceiver module is configured to send third configuration information to the first device, wherein the third configuration information indicates an uplink carrier enabled by the second device for the first device and/or a quantity of uplink carriers enabled by the second device for the first device, and the quantity of uplink carriers enabled by the second device for the first device can be greater than L.

29. The communication apparatus according to any one of claims 25 to 28, wherein the transceiver module is configured to send fourth configuration information to the first device, wherein the fourth configuration information indicates a downlink carrier enabled by the second device for the first device and/or a quantity of downlink carriers enabled by the second device for the first device, and the quantity of downlink carriers enabled by the second device for the first

device can be greater than K.

30. The communication apparatus according to any one of claims 25 to 29, wherein T is greater than J, and J is a quantity of downlink carriers configured by the second device for the first device; and/or

L is greater than K, and K is a maximum quantity of downlink carriers on which the first device can simultaneously perform downlink reception.

31. The communication apparatus according to any one of claims 25 to 30, wherein the T uplink carriers are used for uplink carrier switching.

32. The communication apparatus according to any one of claims 25 to 31, wherein the N uplink carriers are determined based on received downlink control information sent by the second device to the first device.

33. A communication apparatus, wherein the communication apparatus is a first device, the first device comprises a processor and a memory, and the processor and the memory communicate with each other;

the memory is configured to store instructions; and

the processor is configured to execute the instruction in the memory, to perform the method according to any one of claims 1 to 8.

34. A communication apparatus, wherein the communication apparatus is a second device, the second device comprises a processor and a memory, and the processor and the memory communicate with each other;

the memory is configured to store instructions; and

the processor is configured to execute the instruction in the memory, to perform the method according to any one of claims 9 to 16.

35. A computer-readable storage medium, comprising instructions, wherein when the instructions are run on a computer, the computer is enabled to perform the method according to any one of claims 1 to 8 or claims 9 to 16.