

CLAIMS

1. A method for determining a channel resource, applied to a terminal and comprising:

obtaining a candidate resource of a physical sidelink control channel PSCCH,
5 wherein the candidate resource is in a lowest subchannel of a physical sidelink shared channel PSSCH resource selected by the terminal; and

determining a transmission resource of the to-be-transmitted PSCCH based on the candidate resource, wherein

one subchannel has contiguous frequency domain resources.

10 2. The method according to claim 1, wherein the determining a transmission resource of the to-be-transmitted PSCCH based on the candidate resource comprises:

selecting the transmission resource of the to-be-transmitted PSCCH from the candidate resource.

3. The method according to claim 1, wherein in a case that the PSCCH
15 comprises a first-part PSCCH and a second-part PSCCH, the determining a transmission resource of the to-be-transmitted PSCCH based on the candidate resource comprises:

selecting a transmission resource of the to-be-transmitted first-part PSCCH and
a transmission resource of the to-be-transmitted second-part PSCCH from the
20 candidate resource of the PSCCH.

4. The method according to claim 1, wherein in a case that the PSCCH
comprises a first-part PSCCH and a second-part PSCCH, the determining a
transmission resource of the to-be-transmitted PSCCH based on the candidate
resource comprises:

25 selecting a transmission resource of the to-be-transmitted first-part PSCCH
from the candidate resource of the PSCCH; and

the method further comprises:

selecting a transmission resource of the to-be-transmitted second-part PSCCH

on the PSSCH resource selected by the terminal.

5. The method according to claim 4, wherein the selecting a transmission resource of the to-be-transmitted second-part PSCCH on the PSSCH resource selected by the terminal comprises:

5 mapping the second-part PSCCH from a first physical resource block PRB of a PSSCH, to obtain the transmission resource of the second-part PSCCH;

or

mapping the second-part PSCCH from a first PRB of a first subchannel of a PSSCH, to obtain the transmission resource of the second-part PSCCH;

10 or

mapping the second-part PSCCH from a PRB with a first offset value relative to a first PRB of a first subchannel of a PSSCH, to obtain the transmission resource of the second-part PSCCH;

or

15 mapping the second-part PSCCH from a first PRB of a subchannel with a second offset value relative to a first subchannel of a PSSCH, to obtain the transmission resource of the second-part PSCCH, wherein

the first PRB is a highest PRB or lowest PRB, and the first subchannel is a lowest subchannel or highest subchannel of the PSSCH.

20 6. The method according to claim 1, wherein in a case that the PSCCH comprises a first-part PSCCH and a second-part PSCCH, and the candidate resource of the PSCCH comprises a candidate resource of the first-part PSCCH and a candidate resource of the second-part PSCCH,

25 the determining a transmission resource of the to-be-transmitted PSCCH based on the candidate resource comprises:

selecting a transmission resource of the to-be-transmitted first-part PSCCH from the candidate resource of the first-part PSCCH; and

selecting a transmission resource of the to-be-transmitted second-part PSCCH from the candidate resource of the second-part PSCCH.

30 7. The method according to any one of claims 2 to 5, wherein the selecting the

transmission resource from the candidate resource comprises:

selecting the transmission resource from the candidate resource based on channel parameters of the to-be-transmitted channel, wherein

the channel parameters of the to-be-transmitted channel comprise:

5 time domain resource information of the to-be-transmitted channel and frequency domain resource information of the to-be-transmitted channel; and

the candidate resource is the candidate resource of the PSCCH, the transmission resource is the transmission resource of the PSCCH, and the to-be-transmitted channel is the PSCCH;

10 or

the candidate resource is the candidate resource of the PSCCH, the transmission resource is the transmission resource of the first-part PSCCH, and the to-be-transmitted channel is the first-part PSCCH;

or

15 the candidate resource is the candidate resource of the first-part PSCCH, the transmission resource is the transmission resource of the first-part PSCCH, and the to-be-transmitted channel is the first-part PSCCH;

or

20 the candidate resource is the candidate resource of the second-part PSCCH, the transmission resource is the transmission resource of the second-part PSCCH, and the to-be-transmitted channel is the second-part PSCCH.

8. The method according to claim 7, wherein the time domain resource information of the to-be-transmitted channel comprises at least one of the following:

a quantity of time domain symbols;

25 a time domain symbol start location;

a time domain symbol end location; and

a time domain resource pattern.

9. The method according to claim 7, wherein the frequency domain resource information of the to-be-transmitted channel comprises at least one of the following:

30 a quantity of frequency domain resources;

a frequency domain resource start location;
a frequency domain resource end location;
an offset value of the frequency domain resource start location relative to a first resource unit;

5 an offset value of the frequency domain resource end location relative to the first resource unit; and

a frequency domain resource pattern, wherein

the first resource unit is a lowest resource unit or highest resource unit of a resource pool selected by the terminal, or the first resource unit is a lowest resource unit or highest resource unit of the PSSCH resource selected by the terminal.

10 10. The method according to claim 7, wherein the channel parameters of the to-be-transmitted channel further comprise:

time division multiplexing and/or frequency division multiplexing.

11. The method according to any one of claims 3 to 6, further comprising:

15 adding resource information of the second-part PSCCH to the first-part PSCCH, wherein the resource information of the second-part PSCCH comprises at least one of the following:

a time domain resource start location of the second-part PSCCH;

a time domain resource end location of the second-part PSCCH;

20 a quantity of symbols occupied by a time domain resource of the second-part PSCCH;

a frequency domain resource start location of the second-part PSCCH;

a frequency domain resource end location of the second-part PSCCH;

25 a quantity of PRBs occupied by a frequency domain resource of the second-part PSCCH;

a quantity of subchannels occupied by the frequency domain resource of the second-part PSCCH;

a time domain offset value of the second-part PSCCH; and

a frequency domain offset value of the second-part PSCCH.

30 12. The method according to any one of claims 3 to 6, further comprising:

configuring a reference signal of the first-part PSCCH; and
configuring a reference signal of the second-part PSCCH.

13. The method according to claim 12, wherein the configuring a reference signal of the first-part PSCCH comprises:

5 obtaining configuration information that is predefined by a protocol, preconfigured by a network, configured by a network, or configured by the terminal for the reference signal of the first-part PSCCH; and

 configuring the reference signal of the first-part PSCCH based on the configuration information of the reference signal of the first-part PSCCH.

10 14. The method according to claim 12, wherein the configuring a reference signal of the second-part PSCCH comprises:

 configuring the reference signal of the second-part PSCCH by using configuration information that is the same as the configuration information used for the reference signal of the first-part PSCCH;

15 or

 configuring the reference signal of the second-part PSCCH separately;

 or

 configuring the reference signal of the second-part PSCCH by using configuration information of a reference signal of the PSSCH.

20 15. The method according to claim 1, wherein the obtaining a candidate resource of a physical sidelink control channel PSCCH comprises:

 obtaining first configuration information that is predefined by a protocol, preconfigured by a network, configured by a network, or configured by the terminal, wherein the first configuration information comprises at least one of the following:

25 a size of the resource set;

 a start location of the resource set; and

 an end location of the resource set.

16. The method according to claim 1, wherein the obtaining a candidate resource of a physical sidelink control channel PSCCH comprises:

30 obtaining the candidate resource that is of the PSCCH on at least one

subchannel of a PSSCH and that is predefined by a protocol, preconfigured by a network, configured by a network, or configured by the terminal;

or

5 obtaining an offset value of the candidate resource of the PSCCH relative to a subchannel of a PSSCH, wherein the candidate resource is predefined by a protocol, preconfigured by a network, configured by a network, or configured by the terminal;

or,

wherein the obtaining a candidate resource of a physical sidelink control channel PSCCH comprises:

10 obtaining second configuration information that is predefined by a protocol, preconfigured by a network, configured by a network, or configured by the terminal, wherein the second configuration information comprises at least one of the following:

a size of the candidate resource of the PSCCH in the PSSCH subchannel;

15 a start location of the candidate resource of the PSCCH in the PSSCH subchannel;

an end location of the candidate resource of the PSCCH in the PSSCH subchannel;

a quantity of candidate resources of the PSCCH in the PSSCH subchannel;

20 a pattern of the candidate resource of the PSCCH in the PSSCH subchannel;

a size of the candidate resource of the PSCCH in the PSSCH resource;

a start location of the candidate resource of the PSCCH in the PSSCH resource;

an end location of the candidate resource of the PSCCH in the PSSCH resource;

a quantity of candidate resources of the PSCCH in the PSSCH resource; and

25 a pattern of the candidate resource of the PSCCH in the PSSCH resource;

or,

wherein the obtaining a candidate resource of a physical sidelink control channel PSCCH comprises:

obtaining first configuration signaling of a bandwidth part BWP, wherein the
30 configuration signaling is applicable to a resource pool comprised in the BWP;

or

obtaining second configuration signaling of a resource pool, wherein the configuration signaling is applicable to the resource pool;

or

- 5 obtaining third configuration signaling of the subchannel of the PSCCH, wherein the third configuration signaling is applicable to the subchannel of the PSCCH;

or

- 10 obtaining fourth configuration signaling corresponding to a target aggregation level, wherein the fourth configuration signaling is applicable to the PSCCH corresponding to the target aggregation level, wherein

the first configuration signaling, the second configuration signaling, the third configuration signaling, or the fourth configuration signaling is used to configure the candidate resource of the PSCCH.

- 15 17. A terminal, comprising:

an obtaining module, configured to obtain a candidate resource of a physical sidelink control channel PSCCH, wherein the candidate resource is in a lowest subchannel of a physical sidelink shared channel PSSCH resource selected by the terminal; and

- 20 a resource determining module, configured to determine a transmission resource of the to-be-transmitted PSCCH based on the candidate resource, wherein

one subchannel has contiguous frequency domain resources.

- 25 18. A computer-readable storage medium, wherein the computer-readable storage medium stores a computer program, and when the computer program is executed by a processor, steps of the method for determining a channel resource according to any one of claims 1 to 16 are implemented.