

## CLAIMS

What is claimed is:

1. An information transmission method, comprising:  
transmitting sidelink control information SCI and target control information  
5 according to a resource mapping pattern;  
wherein the resource mapping pattern is used to indicate transmission resources for a physical sidelink shared channel PSSCH scheduled by the SCI and for the target control information, and the target control information is next-stage SCI or sidelink feedback control information SFCI.
- 10 2. The method according to claim 1, wherein in the resource mapping pattern, mapping of the target control information starts in time domain from a first location and starts in frequency domain from a second location; wherein  
the first location and/or the second location is determined based on at least one of the following information:  
15 location of a PSSCH demodulation reference signal DMRS;  
transmission configuration parameter;  
number of layers for a PSSCH;  
configuration of a DMRS in use;  
configuration information for SFCI;  
20 transmitted service type;  
resource assigned for a PSSCH; and  
resource configuration for SCI.
3. The method according to claim 2, wherein the location of a PSSCH DMRS  
is:  
25 a location of the N-th DMRS or the N-th DMRS set of the PSSCH, wherein N is an integer greater than or equal to 1; or  
a location of a front-loaded DMRS in the PSSCH.

4. The method according to claim 2, wherein the transmission configuration parameter comprises at least one of the following: number of layers, payload, and code rate.

5. The method according to claim 2, wherein the configuration of a DMRS in use comprises at least one of the following: DMRS type, number of symbols, and multiplexing mode.

6. The method according to claim 2, wherein the configuration information for SFCI comprises: whether SFCI is carried; wherein

in a case that SFCI is carried, the configuration information for SFCI further comprises: a transmission resource for SFCI and/or a size of information carried by SFCI.

7. The method according to claim 2, wherein the transmitted service type comprises: groupcast, unicast, or broadcast.

8. The method according to claim 2, wherein the resource assigned for a PSSCH comprises a frequency-domain resource assigned for the PSSCH and/or a time-domain resource assigned for the PSSCH.

9. The method according to claim 2, wherein in the resource mapping pattern, mapping of the target control information at a target layer starts in time domain from a first location and starts in frequency domain from a second location; wherein the target layer is a single layer or multiple layers.

10. The method according to claim 9, wherein the target layer is predefined or indicated by the SCI.

11. The method according to claim 2, wherein in the resource mapping pattern, mapping of the target control information starts in time domain from a symbol at which the N-th DMRS or N-th DMRS set or front-loaded DMRS of the PSSCH is located, or from the L-th symbol after a symbol at which the N-th DMRS or N-th DMRS set or front-loaded DMRS of the PSSCH is located, and starts in frequency domain from the M-th physical resource block PRB of PRBs assigned for the PSSCH; wherein the M-th PRB is a PRB with a highest index, or a PRB with a lowest index,

or an edge PRB in a target frequency-domain range,  $M$  is an integer greater than or equal to 1, and  $L$  is an integer greater than or equal to 1.

12. The method according to claim 2, wherein in the resource mapping pattern, mapping of the target control information starts in time domain from the  $P$ -th symbol after the SCI and starts in frequency domain from the  $Q$ -th PRB of the SCI; wherein  $Q$  is an integer greater than or equal to 1, and  $P$  is an integer greater than or equal to 1; or,

wherein in the resource mapping pattern, mapping of the target control information starts in time domain from a first available symbol, or a first available symbol not carrying DMRS, assigned for the PSSCH.

13. The method according to claim 2, wherein in the resource mapping pattern, in a case that SFCI is carried, rate matching or puncturing is performed on a location of the SFCI during mapping of the next-stage SCI; or,

15 wherein in a case that the transmitted service type is groupcast or unicast, in the resource mapping pattern, rate matching or puncturing is performed on a location of the SFCI during mapping of the next-stage SCI.

14. The method according to claim 1, wherein the target control information is correspondingly provided with configurations of one or more DMRSs; wherein

20 when the target control information is correspondingly provided with configurations of a plurality of DMRSs, a configuration of a DMRS in use is predefined or determined based on the SCI.

15. The method according to claim 1, wherein a configuration of a DMRS used by the target control information is predefined or indicated by the SCI, different from

25 a configuration of a PSSCH DMRS.

16. The method according to claim 1, wherein the SCI or the next-stage SCI indicates a configuration of a PSSCH DMRS and/or the number of layers for a PSSCH.

17. The method according to claim 1, wherein a ratio of an energy per resource element EPRE of the target control information to an EPRE of a DMRS in use is determined based on at least one of the following information:

type of the DMRS in use;

5       multiplexing mode of the DMRS in use;

number of code division multiplexing CDM groups of the DMRS in use;

number of layers for the target control information;

number of layers for the PSSCH;

time-frequency resource location of the PSSCH; and

10       mapping mode of data on the PSSCH.

18. The method according to claim 2, wherein

the location of a PSSCH DMRS is indicated by SCI, configured by a terminal using radio resource control RRC, predefined, configured by a network using downlink control information DCI, configured by a network using RRC, or pre-

15       configured by a network;

the transmission configuration parameter is indicated by SCI, configured by a terminal using RRC, predefined, configured by a network using DCI, configured by a network using RRC, or pre-configured by a network;

the number of layers for a PSSCH is indicated by SCI, configured by a terminal

20       using RRC, predefined, configured by a network using DCI, configured by a network using RRC, or pre-configured by a network;

the configuration of a DMRS in use is indicated by SCI, configured by a terminal using RRC, predefined, configured by a network using DCI, configured by a network using RRC, or pre-configured by a network;

25       the configuration information for SFCI is indicated by SCI, configured by a terminal using RRC, predefined, configured by a network using DCI, configured by a network using RRC, or pre-configured by a network;

the transmitted service type is indicated by SCI, configured by a terminal using RRC, predefined, configured by a network using DCI, configured by a network using

30       RRC, or pre-configured by a network; and

the resource assigned for a PSSCH is indicated by SCI, configured by a terminal using RRC, predefined, configured by a network using DCI, configured by a network using RRC, or pre-configured by a network.

5 19. A terminal, comprising a processor, a memory, and a computer program stored in the memory and capable of running on the processor, wherein when the computer program is executed by the processor, the steps of the information transmission method according to any one of claims 1 to 18 are implemented.

10 20. 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, the steps of the information transmission method according to any one of claims 1 to 18 are implemented.