

CLAIMS

What is claimed is:

1. An information transmission method, performed by a terminal, 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 when the target control information is the next-stage SCI, in the resource mapping pattern, mapping of the next-stage SCI starts in time domain from a first location and starts in frequency domain from a second location; the first location is determined based on location of a PSSCH demodulation reference signal (DMRS), and the second location is determined based on resource assigned for a PSSCH;

15 or,

when the target control information is the SFCI, in the resource mapping pattern, mapping of the SFCI starts in time domain from a first location which is determined based on resource assigned for a PSSCH.

2. The method according to claim 1, wherein the location of the PSSCH DMRS
20 is:

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.

3. The method according to claim 1, wherein the resource assigned for a PSSCH
25 comprises a frequency-domain resource assigned for the PSSCH and/or a time-domain resource assigned for the PSSCH.

4. The method according to claim 1, wherein in the resource mapping pattern,

mapping of the target control information at a target layer starts in time domain from the first location and starts in frequency domain from the second location; wherein the target layer is a single layer or multiple layers.

5 5. The method according to claim 4, wherein the target layer is predefined or indicated by the SCI.

6. The method according to claim 1, 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 of the PSSCH is located, and starts in frequency domain from the M-th physical resource block PRB of PRBs assigned for the PSSCH; 10 wherein the M-th PRB is a PRB with a lowest index, M is an integer greater than or equal to 1, and L is an integer greater than or equal to 1.

7. The method according to claim 1, 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 a 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.

8. 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.

9. 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.

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

11. 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.

12. 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 an information
10 transmission method are implemented, wherein the information transmission method comprises:

transmitting sidelink control information SCI and target control information according to a resource mapping pattern;

wherein the resource mapping pattern is used to indicate transmission resources
15 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;

when the target control information is the next-stage SCI, in the resource mapping pattern, mapping of the next-stage SCI starts in time domain from a first
20 location and starts in frequency domain from a second location; the first location is determined based on location of a PSSCH demodulation reference signal (DMRS), and the second location is determined based on resource assigned for a PSSCH;

or,

when the target control information is the SFCI, in the resource mapping pattern,
25 mapping of the SFCI starts in time domain from a first location which is determined based on resource assigned for a PSSCH.

13. The terminal according to claim 12, wherein the location of the PSSCH DMRS is:

a location of the N-th DMRS or the N-th DMRS set of the PSSCH, wherein N
30 is an integer greater than or equal to 1; or

a location of a front-loaded DMRS in the PSSCH.

14. The terminal according to claim 12, 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.

5 15. The terminal according to claim 12, wherein in the resource mapping pattern, mapping of the target control information at a target layer starts in time domain from the first location and starts in frequency domain from the second location; wherein the target layer is a single layer or multiple layers.

10 16. The terminal according to claim 12, 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 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 lowest index, M is an integer greater than or equal to 1, and L is an integer greater than or equal to 1.

15 17. A non-transitory computer-readable storage medium, wherein the non-transitory computer-readable storage medium stores a computer program, and when the computer program is executed by a processor, the steps of an information transmission method are implemented, wherein the information transmission method comprises:

20 transmitting sidelink control information SCI and target control information 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
25 feedback control information SFCI;

 when the target control information is the next-stage SCI, in the resource mapping pattern, mapping of the next-stage SCI starts in time domain from a first location and starts in frequency domain from a second location; the first location is determined based on location of a PSSCH demodulation reference signal (DMRS),
30 and the second location is determined based on resource assigned for a PSSCH;

or,

when the target control information is the SFCI, in the resource mapping pattern, mapping of the SFCI starts in time domain from a first location which is determined based on resource assigned for a PSSCH.

5 18. The non-transitory computer-readable storage medium according to claim 17, wherein the location of the PSSCH DMRS is:

 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.

10 19. The non-transitory computer-readable storage medium according to claim 17, 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.

 20. The non-transitory computer-readable storage medium according to claim 15 17, wherein in the resource mapping pattern,

 mapping of the target control information at a target layer starts in time domain from the first location and starts in frequency domain from the second location; wherein the target layer is a single layer or multiple layers.