

CLAIMS

1. A precoding indication method for supporting 8Tx codebook-based physical uplink shared channel (PUSCH) transmission, performed by a network device, comprising:

determining at least one sounding reference signal (SRS) resource set having a function of a codebook for a terminal, wherein each SRS resource set comprises a plurality of SRS resources, and the plurality of SRS resources constitute an SRS resource group for uplink channel sounding and corresponding to 8 SRS antenna ports; and

sending an SRS resource indication (SRI) to the terminal, wherein the SRI indicates a spatial filtration beam used for PUSCH transmission corresponding to an SRS resource set of the at least one SRS resource set.

2. The method according to claim 1, further comprising:

obtaining capability information of the terminal sent by the terminal, wherein the at least one SRS resource set is determined according to the capability information of the terminal.

3. The method according to claim 2, wherein the capability information of the terminal comprises full coherent, partial coherent or non-coherent.

4. The method according to any one of claims 1 to 3, wherein the plurality of SRS resources comprise one or more of:

a single-port SRS resource;

a 2-port SRS resource; or

a 4-port SRS resource.

5. The method according to claim 4, wherein the plurality of SRS resources comprise a combination of SRS resources with a same port numeric count, or a combination of SRS resources with different port numeric counts.

6. The method according to claim 4, wherein the plurality of SRS resources comprise one of:

a combination of two 4-port SRS resources;

a combination of one 4-port SRS resource and two 2-port SRS resources;

a combination of four 2-port SRS resources; or
a combination of eight single-port SRS resources.

7. The method according to any one of claims 1 to 6, further comprising:

sending an SRI table to the terminal, wherein the SRI table comprises a correspondence between an SRI and an SRS resource set, and a numeric count of bits of an SRI indication field of the SRI is determined by N_{SRS} representing a numeric count of SRS resource sets configured for the terminal.

8. The method according to any one of claims 1 to 7, further comprising:

sending bitmap information to the terminal, wherein a bit in the bitmap information has a predefined correspondence with a respective SRS resource set configured, the SRI indicates an SRS resource set selected by precoding indication in line with the predefined correspondence, and is used to instruct the terminal to use a spatial filtration beam corresponding to the SRS resource set during the PUSCH transmission.

9. The method according to claim 8, wherein a numeric count of bits of an SRI indication field of the SRI is determined by N_{SRS} representing a numeric count of SRS resource sets configured for the terminal;

and/or

wherein the plurality of SRS resource sets each are configured as one of:

a periodic SRS resource set;

a semi-persistent SRS resource set; or

an aperiodic SRS resource set.

10. A precoding indication method for supporting 8Tx codebook-based physical uplink shared channel (PUSCH) transmission, performed by a terminal, comprising:

receiving a sounding reference signal (SRS) resource indication (SRI) sent by a network device, wherein the SRI indicates a spatial filtration beam used for PUSCH transmission corresponding to an SRS resource set of at least one SRS resource set.

11. The method according to claim 10, further comprising:

sending capability information of the terminal to the network device, wherein the at least one SRS resource set is determined according to the capability information of the terminal.

12. The method according to claim 11, wherein the capability information of the terminal comprises full coherent, partial coherent or non-coherent.

13. The method according to any one of claims 10 to 12, further comprising:

receiving an SRI table sent by the network device, wherein the SRI table comprises a correspondence between an SRI and an SRS resource set, and a numeric count of bits of an SRI indication field of the SRI is determined by N_{SRS} representing a numeric count of SRS resource sets configured for the terminal.

14. The method according to any one of claims 10 to 13, further comprising:

receiving bitmap information sent by the network device, wherein a bit in the bitmap information has a predefined correspondence with a configured SRS resource set, the SRI indicates an SRS resource set selected by precoding indication in line with the predefined correspondence, and is used to instruct the terminal to use a spatial filtration beam corresponding to the SRS resource set during the PUSCH transmission.

15. The method according to claim 14, wherein a numeric count of bits of an SRI indication field of the SRI is determined by N_{SRS} representing a numeric count of SRS resource sets configured for the terminal;

and/or

wherein the plurality of SRS resource sets each are configured as one of:

a periodic SRS resource set;

a semi-persistent SRS resource set; or

an aperiodic SRS resource set.

16. A precoding indication apparatus for supporting 8Tx codebook-based physical uplink shared channel (PUSCH) transmission, applied to a network device, comprising:

a processing module configured to determine at least one sounding reference signal (SRS) resource set having a function of a codebook for a terminal, wherein each SRS resource set

comprises a plurality of SRS resources, and the plurality of SRS resources constitute an SRS resource group for uplink channel sounding and corresponding to 8 SRS antenna ports; and

a first transceiving module configured to send an SRS resource indication (SRI) to the terminal, wherein the SRI indicates a spatial filtration beam used for PUSCH transmission corresponding to an SRS resource set of the at least one SRS resource set.

17. A precoding indication apparatus for supporting 8Tx codebook-based physical uplink shared channel (PUSCH) transmission, applied to a terminal, comprising:

a second transceiving module configured to receive a sounding reference signal (SRS) resource indication (SRI) sent by a network device, wherein the SRI indicates a spatial filtration beam used for PUSCH transmission corresponding to an SRS resource set of at least one SRS resource set.

18. A communication device, comprising: a processor and a memory having stored therein a computer program that, when executed by the processor, causes the communication device to perform the method according to any one of claims 1 to 15.

19. A communication device, comprising: a processor and an interface circuit, wherein the interface circuit is configured to receive code instructions and transmit them to the processor, and

the processor is configured to run the code instructions to perform the method according to any one of claims 1 to 15.

20. A computer-readable storage medium having stored therein instructions that, when executed, cause the method according to any one of claims 1 to 15 to be implemented.