

WHAT IS CLAIMED IS:

1. A method for transmission configuration for multiple transmission reception points (TRPs), performed by a network device, wherein the multiple TRPs comprise a first TRP and a second TRP, and the method comprises:

determining configuration information for a sounding reference signal (SRS) resource indicator (SRI) indication field in downlink control information (DCI) according to SRS resource set configuration information of the first TRP and the second TRP;

wherein the SRS resource set configuration information indicates a number of SRS resources comprised in a first SRS resource set corresponding to the first TRP and a number of SRS resources comprised in a second SRS resource set corresponding to the second TRP, and indicates whether the first SRS resource set and the second SRS resource set are used for a codebook function or a non-codebook function;

wherein determining the configuration information for the SRI indication field in the DCI comprises:

determining configuration information for indicating a number of bits of a first SRI indication field and a number of bits of a second SRI indication field in the DCI according to the SRS resource set configuration information, wherein the first SRI indication field is configured to indicate a selected SRS resource for the first TRP, and the second SRI indication field is configured to indicate a selected SRS resource for the second TRP, and wherein the SRS resource set configuration information indicates the number of the SRS resources comprised in the first SRS resource set and the number of the SRS resources comprised in the second SRS resource set are greater than 1; and

wherein determining the configuration information for indicating the number of bits of the first SRI indication field and the number of bits of the second SRI indication field in the DCI comprises:

determining that the SRS resource set configuration information indicates the first SRS resource set and the second SRS resource set are used for the codebook function; and

determining that the number of bits of the first SRI indication field is a larger value of $\lceil \log_2(M) \rceil$ and $\lceil \log_2(N) \rceil$ and the number of bits of the second SRI indication field is $\lceil \log_2(N) \rceil$, wherein M is the number of the SRS resources comprised in the first SRS resource set, N is the number of the SRS resources comprised in the second SRS resource set, and $\lceil \cdot \rceil$ represents round up.

2. The method according to claim 1, wherein determining the configuration information for indicating the number of bits of the first SRI indication field and the number of bits of the second SRI indication field in the DCI comprises:

determining that the SRS resource set configuration information indicates the first SRS resource set and the second SRS resource set are used for the non-codebook function; and

determining that the number of bits of the first SRI indication field is a larger value of $\lceil \log_2(M) \rceil$ and $\lceil \log_2(N) \rceil$ and the number of bits of the second SRI indication field is a larger value of $\lceil \log_2(A) \rceil$ and 1, wherein M is the number of the SRS resources comprised in the first SRS resource set, A is a number of entries with a rank being X in a pre-configured SRI table, X is a rank determined according to the first SRI indication field, and $\lceil \cdot \rceil$ represents round up.

3. The method according to claim 1, wherein determining the configuration information for the SRI indication field in the DCI comprises:

determining that the SRS resource set configuration information indicates one of the number of the SRS resources comprised in the first SRS resource set and the number of the SRS resources comprised in the second SRS resource set is equal to 1; and

determining configuration information for indicating a number of bits of the SRI indication field in the DCI, wherein the SRI indication field is configured to indicate a selected SRS resource for a TRP in the first TRP and the second TRP, corresponding to an SRS resource set comprising more than one SRS resource.

4. The method according to claim 3, wherein determining the configuration information for indicating the number of bits of the SRI indication field in the DCI comprises:

determining that the SRS resource set configuration information indicates the number of the SRS resources comprised in the first SRS resource set is equal to 1 and the first SRS resource set and the second SRS resource set are used for the non-codebook function; and

determining that the number of bits of the SRI indication field is $\lceil \log_2(N) \rceil$, wherein N is the number of the SRS resources comprised in the second SRS resource set, or determining the number of bits of the SRI indication field is a larger value of $\lceil \log_2(A) \rceil$ and 1, wherein A is a number of entries with a rank being 1 in a pre-configured SRI table, and $\lceil \cdot \rceil$ represents round up.

5. The method according to claim 3, wherein determining the configuration information for indicating the number of bits of the SRI indication field in the DCI comprises:

determining that the SRS resource set configuration information indicates the number of the SRS resources comprised in the second SRS resource set is equal to 1 and the first SRS resource set and the second SRS resource set are used for the non-codebook function; and

determining that the number of bits of the SRI indication field is $\lceil \log_2(M) \rceil$, wherein M is the number of the SRS resources comprised in the first SRS resource set, and $\lceil \cdot \rceil$ represents round up.

6. The method according to claim 3, wherein determining the configuration information for indicating the number of bits of the SRI indication field in the DCI comprises:

determining that the SRS resource set configuration information indicates the first SRS resource set and the second SRS resource set are used for the codebook function; and

determining that the number of bits of the SRI indication field is $\lceil \log_2(S) \rceil$, wherein S is another one of the number of the SRS resources comprised in the first SRS resource set and the number of the SRS resources comprised in the second SRS resource set, and $\lceil \cdot \rceil$ represents round up.

7. The method according to any one of claims 1 to 6, applicable to a grant physical uplink shared channel (PUSCH) transmission and a grant free PUSCH transmission.

8. An apparatus for transmission configuration for multiple transmission reception points (TRPs), applicable to a network device, wherein the multiple TRPs comprise a first TRP and a second TRP, and the apparatus comprises:

a processing module, configured to determine configuration information for a sounding reference signal (SRS) resource indicator (SRI) indication field in downlink control information (DCI) according to SRS resource set configuration information of the first TRP and the second TRP;

wherein the SRS resource set configuration information indicates a number of SRS resources comprised in a first SRS resource set corresponding to the first TRP and a number of SRS resources comprised in a second SRS resource set corresponding to the second TRP, and indicates whether the first SRS resource set and the second SRS resource set are used for a codebook function or a non-codebook function;

wherein the processing module is further configured to:

determine configuration information for indicating a number of bits of a first SRI indication field and a number of bits of a second SRI indication field in the DCI according to the SRS resource set configuration information, wherein the first SRI indication field is configured to indicate a selected SRS resource for the first TRP, and the second SRI indication field is configured to indicate a selected SRS resource for the second TRP, and wherein the SRS resource set configuration information indicates the number of the SRS resources comprised in the first SRS resource set and the number of the SRS resources comprised in the second SRS resource set are greater than 1; and

wherein the processing module is further configured to:

determine that the SRS resource set configuration information indicates the first SRS resource set and the second SRS resource set are used for the codebook function; and

determine that the number of bits of the first SRI indication field is a larger value of $\lceil \log_2(M) \rceil$ and $\lceil \log_2(N) \rceil$ and the number of bits of the second SRI indication field is $\lceil \log_2(N) \rceil$, wherein M is the number of the SRS resources comprised in the first SRS resource set, N is the number of the SRS resources comprised in the second SRS resource set, and $\lceil \cdot \rceil$ represents round up.

9. A communication device, comprising: a transceiver, a memory, and a processor respectively connected to the transceiver and the memory and configured to control transceiving of wireless signals of the transceiver and perform the method according to any one of claims 1 to 7, by performing computer executable instructions on the memory.

10. A computer storage medium storing computer executable instructions, wherein when the computer executable instructions are executed by a processor, the method according to any one of claims 1 to 7 is caused to be implemented.