CLAIMS

1. A beam measurement method, comprising:

determining a channel occupancy ratio and a channel busy ratio of each of N beams, wherein N is a positive integer greater than or equal to 1;

determining a first beam from the N beams based on the channel occupancy ratio and the channel busy ratio of each beam; and

sending first sidelink information by using the first beam.

2. The method according to claim 1, wherein

the channel occupancy ratio meets the following relationship:

$CR_{\mathrm{j}} = \frac{CH_j}{CH_{total,j}}$, wherein

j=1, ..., N, CR_{j} represents a channel occupancy ratio of a beam j within a first time period, $CH_{total,\mathrm{j}}$ represents a total quantity of subchannels of the beam j within the first time period, and CH_j represents a sum of a quantity of subchannels that have been transmitted and a quantity of subchannels that are to be transmitted in the beam j within the first time period.

3. The method according to claim 1 or 2, wherein

the channel busy ratio meets the following relationship:

$\mathrm{CBR}_j = \frac{Q}{\mathrm{CH_{total}}}$, wherein

j=1, ..., N, CBR_j represents a channel busy ratio of the beam j within a second time period, Q represents a quantity of subchannels greater than or equal to a received signal strength indicator RSSI threshold in the beam j within the second time period, and CH_{total} represents a total quantity of subchannels or a total quantity of measured subchannels of the beam j within the second time period.

4. The method according to any one of claims 1 to 3, wherein determining the first beam from the N beams based on the channel occupancy ratio and the channel busy ratio comprises:

determining the first beam from the N beams based on a first condition, wherein the first condition is:

$$\sum_{\mathrm{i}\geq\mathrm{k}} \mathrm{CR}_j(\mathrm{i}) \leq \mathrm{CR}_{\mathrm{Limit},j}(\mathrm{k}), \text{wherein}$$

j=1, ..., N, $\mathrm{CR}_{\mathrm{j}}(\mathrm{i})$ is a channel occupancy ratio of the beam j for transmitting information on

a physical sidelink shared channel PSSCH of a priority i within the first time period, $\mathrm{CR}_{\mathrm{Limit,j}}(\mathrm{k})$ is a channel occupancy ratio threshold of the beam j, the channel occupancy ratio threshold is associated with a priority k and a channel busy ratio, and the first beam meets the first condition.

5. The method according to claim 4, wherein determining the first beam from the N beams based on the channel occupancy ratio and the channel busy ratio of each beam comprises:

determining S beams from the N beams based on the channel occupancy ratio and the channel busy ratio of each beam, wherein S is a positive integer less than or equal to N, and the S beams meet the first condition; and

determining the first beam from the S beams based on a reference signal received power RSRP of each beam, wherein the first beam is a beam with a largest RSRP in the S beams.

6. The method according to claim 4, wherein determining the first beam from the N beams based on the channel occupancy ratio and the channel busy ratio of each beam comprises:

determining L beams from the N beams based on the channel occupancy ratio and the channel busy ratio of each beam, wherein L is a positive integer less than or equal to N, and the L beams meet the first condition; and

determining the first beam from the L beams based on the channel occupancy ratio and the channel busy ratio of each beam, wherein the first beam is a beam with smallest $\sum_{i\geq k} CR_{\mathrm{j}}(i)$ in the L beams.

7. The method according to any one of claims 1 to 6, wherein before sending the first sidelink information by using the first beam, the method further comprises:

determining to-be-sent information, wherein the to-be-sent information comprises the first sidelink information and second sidelink information; and

when the first beam is used to send the first sidelink information and the second sidelink information, and the first beam does not meet the first condition, determining a second beam, wherein the second beam meets the first condition, and the second beam belongs to the N beams; and

the method further comprises:

sending the second sidelink information by using the second beam.

8. The method according to claim 7, wherein the first sidelink information is initial transmission information, and the second sidelink information is retransmission information.

9. The method according to any one of claims 1 to 8, wherein determining the channel occupancy ratio and the channel busy ratio of each of the N beams comprises:

receiving a first parameter, wherein the first parameter is from a second terminal device, the first parameter indicates a resource occupation status of a third beam, the first parameter is obtained by the second terminal device through measurement by using the third beam, the second terminal device is a receive end of a first terminal device, and the third beam is a receive beam corresponding to a fourth beam; and

determining a channel occupancy ratio and a channel busy ratio of the fourth beam based on the first parameter.

10. The method according to claim 9, wherein determining the channel occupancy ratio and the channel busy ratio of the fourth beam based on the first parameter comprises:

determining the channel occupancy ratio and the channel busy ratio of the fourth beam based on the first parameter and a second parameter, wherein the second parameter indicates a resource occupation status of the fourth beam, and the second parameter is obtained by the first terminal device through measurement by using the fourth beam.

11. The method according to any one of claims 1 to 10, wherein determining the channel occupancy ratio and the channel busy ratio of each of the N beams comprises:

when at least two of the N beams meet at least one of the following, the at least two beams have a same channel occupancy ratio and a same channel busy ratio:

RSRPs respectively corresponding to the at least two beams are greater than or equal to a first threshold;

or

the at least two beams belong to a same antenna panel;

or

an included angle between maximum radiation directions of main lobes of the at least two beams is less than or equal to a second threshold.

12. The method according to any one of claims 1 to 11, wherein the method further comprises:

determining the N beams based on RSRPs respectively corresponding to M beams, wherein RSRPs respectively corresponding to the N beams are greater than or equal to a third threshold, and M is a positive integer greater than or equal to N.

13. A communication apparatus, wherein the communication apparatus comprises a

processing unit and a transceiver unit, wherein the processing unit is configured to determine a channel occupancy ratio and a channel busy ratio of each of N beams, wherein N is a positive integer greater than or equal to 1; the processing unit is further configured to determine a first beam from the N beams based on the channel occupancy ratio and the channel busy ratio of each beam; and the transceiver unit is further configured to send first sidelink information by using the first beam.

14. The apparatus according to claim 13, wherein the channel occupancy ratio meets the following relationship:

$CR_{\mathrm{j}} = \frac{CH_j}{CH_{total,j}}$, wherein

j=1, ..., N, CR_{j} represents a channel occupancy ratio of a beam j within a first time period, $CH_{total,\mathrm{j}}$ represents a total quantity of subchannels of the beam j within the first time period, and CH_j represents a sum of a quantity of subchannels that have been transmitted and a quantity of subchannels that are to be transmitted in the beam j within the first time period.

15. The apparatus according to claim 13 or 14, wherein the channel busy ratio meets the following relationship:

$\mathrm{CBR}_j = \frac{Q}{\mathrm{CH_{total}}}$, wherein

j=1, ..., N, CBR_j represents a channel busy ratio of the beam j within a second time period, Q represents a quantity of subchannels greater than or equal to an RSSI threshold in the beam j within the second time period, and CH_{total} represents a total quantity of subchannels or a total quantity of measured subchannels of the beam j within the second time period.

16. The apparatus according to any one of claims 13 to 15, wherein that the processing unit is configured to determine the first beam from the N beams based on the channel occupancy ratio and the channel busy ratio comprises:

the processing unit determines the first beam from the N beams based on a first condition, wherein the first condition is:

$$\sum_{\mathrm{i}\geq\mathrm{k}} \mathrm{CR}_j(\mathrm{i}) \leq \mathrm{CR}_{\mathrm{Limit},j}(\mathrm{k}), \text{wherein}$$

j=1, ..., N, $\mathrm{CR_j(i)}$ is a channel occupancy ratio of the beam j for transmitting information on a PSSCH of a priority i within the first time period, $\mathrm{CR_{Limit,j}(k)}$ is a channel occupancy ratio

threshold of the beam j, the channel occupancy ratio threshold is associated with a priority k and a channel busy ratio, and the first beam meets the first condition.

17. The apparatus according to claim 16, wherein that the processing unit determines the first beam from the N beams based on the channel occupancy ratio and the channel busy ratio of each beam comprises:

the processing unit is configured to determine S beams from the N beams based on the channel occupancy ratio and the channel busy ratio of each beam, wherein S is a positive integer less than or equal to N, and the S beams meet the first condition; and

the processing unit is further configured to determine the first beam from the S beams based on a reference signal received power RSRP of each beam, wherein the first beam is a beam with a largest RSRP in the S beams.

18. A communication apparatus, comprising:

a processor, configured to execute computer instructions stored in a memory, to enable the apparatus to perform the method according to any one of claims 1 to 12.

19. A computer-readable storage medium, wherein the computer-readable storage medium is configured to store a computer program, and when the computer program is run on a computer, the computer is enabled to perform the method according to any one of claims 1 to 12.