

WHAT IS CLAIMED IS:

1. A method for information transmission, performed by a user equipment (UE), comprising:
sending capability information of the UE to a network device, wherein the capability information is configured for the network device to determine number n of rounds of reference signal measurements to be performed by the UE in I receiving beam directions, and one round of reference signal measurement comprises one or more reference signal measurements in X receiving beam directions of J antennas, wherein the J antennas cover the I receiving beam directions, J is a positive integer greater than 2, X is a positive integer less than or equal to J , and I is a positive integer greater than J .

2. The method according to claim 1, wherein the capability information comprises: a receiving beam coverage factor, and the receiving beam coverage factor is configured to determine the number n of rounds.

3. The method according to claim 1 or 2, wherein the number n of rounds is determined according to number of receiving beam directions associated with each antenna and number of receiving beam directions overlapping between the J antennas.

4. The method according to any one of claims 1 to 3, wherein in a case where $J=2$, and each antenna is associated with r receiving beam directions, the number n of rounds is represented by:

$$n = r - \text{Floor}(m/2)$$

where n represents the number n of rounds of reference signal measurements, m represents number of receiving beam directions overlapping between the J antennas, and Floor() represents rounding down.

5. The method according to any one of claims 1 to 4, further comprising:
receiving a measurement configuration sent by the network device, wherein the measurement configuration comprises: a measurement duration for the reference signal measurements in the I receiving beam directions, wherein a beam scanning coefficient N for determining the measurement duration is determined based on the capability information,

optionally, the beam scanning coefficient N is equal to the number n of rounds.

6. The method according to any one of claims 1 to 5, wherein the J antennas of the UE support respective reference signal measurements in the same or different receiving beam directions simultaneously; and/or

the J antennas of the UE are able to perform the reference signal measurement in the X receiving beam directions simultaneously.

7. A method for information transmission, performed by a network device, comprising:

receiving capability information sent by a user equipment (UE), wherein the capability

information is configured to determine number n of rounds of reference signal measurements to be performed by the UE in I receiving beam directions, and one round of reference signal measurement comprises one or more reference signal measurements in X receiving beam directions of J antennas, wherein the J antennas cover the I receiving beam directions, J is a positive integer greater than 2, X is a positive integer less than or equal to J , and I is a positive integer greater than J .

8. The method according to claim 7, wherein the capability information comprises: a receiving beam coverage factor configured to indicate the number n of rounds.

9. The method according to claim 7 or 8, wherein the number n of rounds is determined according to number of receiving beam directions associated with each antenna and number of receiving beam directions overlapping between the J antennas.

10. The method according to any one of claims 7 to 9, wherein in a case where $J=2$, and each antenna is associated with r receiving beam directions, the number n of rounds is represented by:

$$n = r - \text{Floor}(m/2)$$

where n represents the number n of rounds of reference signal measurements, m represents the number of receiving beam directions overlapping between the J antennas, and $\text{Floor}()$ represents rounding down.

11. The method according to any one of claims 7 to 10, further comprising:
determining a beam scanning coefficient N according to the capability information; and
determining a measurement duration for the UE to perform the reference signal measurements in the I receiving beam directions according to the beam scanning coefficient N ,
optionally, the beam scanning coefficient N is equal to the number n of rounds.

12. The method according to claim 11, further comprising:
sending a measurement configuration to the UE, wherein the measurement configuration at least comprises: the measurement duration.

13. The method according to any one of claims 7 to 12, wherein the J antennas of the UE support respective reference signal measurements in the same or different receiving beam directions simultaneously; and/or

the J antennas of the UE are able to perform the reference signal measurement in the X receiving beam directions simultaneously.

14. A communication device, comprising a processor, a transceiver, a memory and an executable program stored in the memory and runnable by the processor, wherein the processor is configured to perform the method for information transmission according to any one of claims 1 to 6 or claims 7 to 13 when running the executable program.

15. A computer storage medium, having stored therein an executable program that, when

executed by a processor, causes the method for information transmission according to any one of claims 1 to 6 or claims 7 to 13 to be implemented.