

WHAT IS CLAIMED IS:

1. A beam management method, performed by a first device, the method comprising:
receiving reference signal configuration information; and
measuring reference signals based on the reference signal configuration information, and
sending a measurement report, wherein the measurement report comprises first arrival path
information of beams corresponding to the reference signals.
2. The method of claim 1, wherein the first arrival path information indicates that a beam
corresponding to a reference signal is a first arrival path, or the first path arrival information
indicates that the beam corresponding to the reference signal is not a first arrival path.
3. The method of claim 1, wherein the first arrival path information comprises time-of-
flight information of the reference signals.
4. The method of claim 3, wherein the time-of-flight information comprises sorting
information obtained by sorting a plurality of arrival paths according to the time-of-flight
information.
5. The method of claim 3, wherein the time-of-flight information comprises time-of-flight
values.
6. The method of claim 5, wherein the time-of-flight values comprise an absolute time-
of-flight value and/or relative values relative to the absolute time-of-flight value.
7. The method of claim 5, wherein the time-of-flight values comprise a specified value
and/or relative values relative to the specified value.
8. The method of claim 6 or 7, wherein the absolute time-of-flight value or the specified
value corresponds to a reference signal with a shortest time-of-flight.
9. The method of any one of claims 3 to 8, wherein the time-of-flight information
comprises a one-way time-of-flight or a two-way time-of-flight.
10. The method of claim 1, wherein the measurement report further comprises one or more
reference signal identifiers.
11. The method of claim 10, wherein a reference signal identifier is determined based on
a signal strength value and/or a time-of-flight.
12. The method of claim 11, wherein the one or more reference signal identifiers
correspond to one or more reference signals with a strongest signal strength value among
measured signal strength values, and/or the one or more reference signal identifiers correspond
to one or more reference signals with a shortest time-of-flight among measured time-of-flight;
and/or the one or more reference signal identifiers correspond to one or more reference signals

with a maximum weighted sum of measured signal strength value and measured time-of-flight.

13. A beam management method, performed by a second device, the method comprising:
sending reference signal configuration information; and

receiving a measurement report obtained and sent by measuring reference signals by a first device based on the reference signal configuration information, wherein the measurement report comprises first arrival path information of beams corresponding to the reference signals.

14. The method of claim 13, wherein the first arrival path information indicates that a beam corresponding to a reference signal is a first arrival path, or the first arrival path information indicates that the beam corresponding to the reference signal is not a first arrival path.

15. The method of claim 13, wherein the first arrival path information comprises time-of-flight information of the reference signals.

16. The method of claim 15, wherein the time-of-flight information comprises sorting information obtained by sorting a plurality of arrival paths according to the time-of-flight information.

17. The method of claim 15, wherein the time-of-flight information comprises time-of-flight values.

18. The method of claim 17, wherein the time-of-flight values comprise an absolute time-of-flight value and/or relative values relative to the absolute time-of-flight value.

~~19. The method of claim 17, wherein the time-of-flight values comprise a specified value, and/or relative values relative to the specified value.~~

~~20. The method of claim 18 or 19, wherein the absolute time-of-flight value or the specified value corresponds to the reference signal with a shortest time-of-flight.~~

~~21. The method of any one of claims 15 to 20, wherein the time-of-flight comprises a one-way time-of-flight or a two-way time-of-flight.~~

~~22. The method of claim 13, wherein the measurement report further comprises one or more reference signal identifiers.~~

~~23. The method of claim 22, wherein a reference signal identifier is determined based on a signal strength value and/or a time-of-flight.~~

~~24. The method of claim 23, wherein the one or more reference signal identifiers correspond to one or more reference signals with a strongest signal strength value among measured signal strength values, and/or the one or more reference signal identifiers correspond to one or more reference signals with a shortest time-of-flight among measured time-of-flight;~~

and/or the one or more reference signal identifiers correspond to one or more reference signals with a maximum weighted sum of measured signal strength value and measured time of flight.

25. A beam management apparatus, applied to a first device, the apparatus comprising:
a receiving unit, configured to receive reference signal configuration information;
a measuring unit, configured to measure reference signals based on the reference signal configuration information; and
a sending unit, configured to send a measurement report, wherein the measurement report comprises first arrival path information of beams corresponding to the reference signals.

26. The apparatus of claim 25, wherein the first arrival path information indicates that a beam corresponding to a reference signal is a first arrival path, or the first path arrival information indicates that the beam corresponding to the reference signal is not a first arrival path.

27. The apparatus of claim 25, wherein the first arrival path information comprises time-of-flight information of the reference signals.

28. The apparatus of claim 27, wherein the time of flight information comprises sorting information obtained by sorting a plurality of arrival paths according to time of flight.

29. The apparatus of claim 27, wherein the time of flight information comprises time-of-flight values.

30. The apparatus of claim 25, wherein the measurement report comprises one or more reference signal identifiers.

31. The apparatus of claim 30, wherein a reference signal identifier is determined based on a signal strength value and/or a time of flight.

32. A beam management apparatus, applied to a second device, the apparatus comprising:
a sending unit, configured to send reference signal configuration information; and
a receiving unit configured to receive a measurement report obtained and sent by measuring reference signals by a first device based on the reference signal configuration information, wherein the measurement report comprises first arrival path information of beams corresponding to the reference signals.

33. 19. A beam management device, comprising:
a processor; and
a memory for storing instructions executable by the processor;
wherein the processor is configured to execute the beam management method of any one of claims 1 to 12.

3420. A beam management device, comprising:
a processor; and
a memory for storing instructions executable by the processor;
wherein the processor is configured to execute the beam management method of any one of claims 13 to ~~24~~18.

~~35. A non-transitory computer-readable storage medium, wherein when instructions stored in the storage medium are executed by a processor of a first device, the first device is caused to execute the beam management method of any one of claims 1 to 12.~~

~~36. A non-transitory computer-readable storage medium, wherein when instructions stored in the storage medium are executed by a processor of a first device, the first device is caused to execute the beam management method of any one of claims 13 to 24.~~