

Claims

1. A method for uplink transmission, comprising:

receiving, by a terminal device, indication information sent by a network device, the indication information being used for indicating at least one beam corresponding to at least one uplink transmission channel of the terminal device, wherein each of at least one beam is used for transmitting each uplink of its corresponding transmission channel; and

performing, by the terminal device, uplink transmission according to the indication information; wherein the at least one uplink transmission channel comprises a Physical Uplink Shared Channel, PUSCH, and a Physical Uplink Control Channel, PUCCH, and wherein the PUSCH and the PUCCH correspond to a same beam.

2. The method according to claim 1, wherein the indication information comprises information of the beam corresponding to each uplink transmission channel in the at least one uplink transmission channel.

3. The method according to claim 2, wherein the indication information of the beam corresponding to the PUSCH, and information of the beam corresponding to the PUCCH.

4. The method according to claim 2, wherein the information of the beam corresponding to each uplink transmission channel comprises beam identity of the beam corresponding to the each uplink transmission channel.

5. The method according to claim 2, wherein the information of the beam corresponding to each uplink transmission channel comprises an index of the beam corresponding to the each uplink transmission channel, and the index of the beam corresponding to the each uplink transmission channel is used to indicate the beam corresponding to the each uplink transmission channel among a pre-configured beam set.

6. The method according to claim 5, wherein the beam set is configured by the network device to the terminal device through a high-layer signaling.

7. The method according to any one of claims 1-6, wherein the indication information is specific indication information for a terminal device, or the indication information is specific indication information for a group of terminal devices; or, wherein the indication information is sent by the network device through downlink control information, DCI.

8. A method for uplink transmission, comprising:

generating, by a network device, indication information for indicating at least one beam corresponding to at least one uplink transmission channel of a terminal device, wherein each of the at least one beam is used for transmitting each of its corresponding uplink transmission

channel; and

sending, by the network device, the indication information to the terminal device; wherein the at least one uplink transmission channel comprises a Physical Uplink Shared Channel, PUSCH, and a Physical Uplink Control Channel, PUCCH, and wherein the PUSCH and the PUCCH correspond to a same beam.

9. The method according to claim 8, wherein the indication information comprises information of the beam corresponding to each uplink transmission channel in the at least one uplink transmission channel.

10. The method according to claim 9, wherein the indication information of the beam corresponding to the PUSCH, and information of the beam corresponding to the PUCCH.

11. The method according to claim 9, wherein the information of the beam corresponding to each uplink transmission channel comprises beam identity of the beam corresponding to the each uplink transmission channel.

12. The method according to claim 9, wherein the information of the beam corresponding to each uplink transmission channel comprises an index of the beam corresponding to the each uplink transmission channel, and the beam index of the beam corresponding to the each uplink transmission channel is used to indicate the beam corresponding to the each uplink transmission channel among a pre-configured beam set.

13. The method according to claim 12, wherein the beam set is configured by the network device to the terminal device through a high-layer signaling.

14. The method according to any one of claims 8-13, wherein the indication information is specific indication information for a terminal device, or the indication information is specific indication information for a group of terminal devices;

or,

wherein the indication information is sent by the network device through downlink control information, DCI.

15. A terminal device, comprising:

a receiving unit used for receiving indication information sent by a network device, the indication information being used for indicating at least one beam corresponding to at least one uplink transmission channel of the terminal device, wherein each of the at least one beam is used for transmitting each of its corresponding uplink transmission channel; and

a transmission unit used for performing uplink transmission according to the indication information; wherein the at least one uplink transmission channel comprises a Physical Uplink Shared Channel, PUSCH, and a Physical Uplink Control Channel, PUCCH, and wherein the

PUSCH and the PUCCH correspond to a same beam.

16. The terminal device according to claim 15, wherein the indication information comprises information of the beam corresponding to each uplink transmission channel in the at least one uplink transmission channel.

5 17. The terminal device according to claim 16, wherein the indication information of the beam corresponding to the PUSCH, and information of the beam corresponding to the PUCCH.

18. The terminal device according to claim 16, wherein the information of the beam corresponding to each uplink transmission channel comprises beam identity of the beam corresponding to the each uplink transmission channel.

10 19. The terminal device according to claim 16, wherein the information of the beam corresponding to each uplink transmission channel comprises an index of the beam corresponding to the each uplink transmission channel, and the index of the beam corresponding to the each uplink transmission channel is used to indicate the beam corresponding to the each uplink transmission channel among a pre-configured beam set.

15 20. The terminal device according to claim 19, wherein the beam group is a beam group configured by the network device to the terminal device through a high-level signaling.

21. The terminal device according to any one of claims 15-20, wherein the indication information is specific indication information for a terminal device, or the indication information is specific indication information for a group of terminal devices; or, wherein the
20 indication information is sent by the network device through downlink control information, DCI.

22. A network device, comprising:

a generating unit used for generating indication information for indicating at least one beam corresponding to at least one uplink transmission channel of a terminal device, wherein
25 each of the at least one beam is used for transmitting each of its corresponding uplink transmission channel; and

a sending unit, used for sending the indication information to the terminal device; wherein the at least one uplink transmission channel comprises a Physical Uplink Shared Channel, PUSCH, and a Physical Uplink Control Channel, PUCCH, and wherein the PUSCH and the
30 PUCCH correspond to a same beam.

23. The network device according to claim 22, wherein the indication information comprises information of the beam corresponding to each uplink transmission channel in the at least one uplink transmission channel.

24. The network device according to claim 23, wherein the indication information of the

beam corresponding to the PUSCH, and information of the beam corresponding to the PUCCH.

25. The network device according to claim 23, wherein the information of the beam corresponding to each uplink transmission channel comprises beam identity of the beam corresponding to the each uplink transmission channel.

5 26. The network device according to claim 23, wherein the information of the beam corresponding to each uplink transmission channel comprises an index of the beam corresponding to the each uplink transmission channel, and the index of the beam corresponding to the each uplink transmission channel is used to indicate the beam corresponding to the each uplink transmission channel among a pre-configured beam set.

10 27. The network device according to claim 26, wherein the beam set is configured by the network device to the terminal device through a high-layer signaling.

28. The network device according to any one of claims 22-27, wherein the indication information is specific indication information for a terminal device, or the indication information is specific indication information for a group of terminal devices;

15 or,

wherein the indication information is sent by the network device through downlink control information, DCI.