

CLAIMS

1. An information transmission method, applied to a network device and comprising:

transmitting first information to a terminal, wherein the first information indicates a first Transmission Configuration Indication-State (TCI-State) and a second TCI-state, the first TCI-State indicates a first Reference Signal (RS) and the second TCI-State indicates a second RS, the first RS is corresponding to QCL-TypeA {Doppler shift, Doppler spread, average delay, delay spread}, and the second RS is corresponding to the QCL-TypeA {Doppler shift, Doppler spread, average delay, delay spread} but by means of pre-configuration or signaling indication, the second RS is not associated with Doppler shift and Doppler spread or the second RS is not considered regarding the Doppler shift and the Doppler spread.

2. The method of claim 1, wherein the first information is transmitted to the terminal by one of the following ways:

Radio Resource Control (RRC) signaling;
Medium Access Control Control Element (MAC CE); and
Downlink Control Information (DCI).

3. The method of claim 1, wherein the first RS comprises a first Tracking Reference Signal (TRS); and the second RS comprises a second TRS.

4. The method of any one of claims 1-3, further comprising:

receiving an uplink signal transmitted by the terminal, wherein a modulated carrier frequency of the uplink signal is associated with a carrier frequency at which the first RS is received; or the modulated carrier frequency of the uplink signal is unassociated with a carrier frequency at which the second RS is received.

5. An information transmission method, applied to a terminal and comprising:

receiving first information transmitted by a network side, wherein the first information indicates a first Transmission Configuration Indication-State (TCI-State) and a second TCI-state, the first TCI-State indicates a first Reference Signal (RS) and the second TCI-State indicates a second RS, the first RS is corresponding to QCL-TypeA {Doppler shift, Doppler spread, average delay, delay spread}, and the second RS is corresponding to the QCL-TypeA

{Doppler shift, Doppler spread, average delay, delay spread} but by means of pre-configuration or signaling indication, the second RS is not associated with Doppler shift and Doppler spread or the second RS is not considered regarding the Doppler shift and the Doppler spread.

6. The method of claim 5, wherein the first information transmitted by the network side is received by one of the following ways:

- Radio Resource Control (RRC) signaling;
- Medium Access Control Control Element (MAC CE); and
- Downlink Control Information (DCI).

7. The method of claim 5, wherein the second RS is capable of being associated with the Doppler shift, the Doppler spread, the average delay, and the delay spread;

determining, by using the first information, that the second RS is associated with one of:

- average delay;
- delay spread; and
- average delay and delay spread.

8. The method of claim 5, wherein the first RS comprises a first Tracking Reference Signal (TRS); and the second RS comprises a second TRS.

9. The method of any one of claims 5-8, further comprising:

- determining a modulated carrier frequency of an uplink signal, wherein the modulated carrier frequency of the uplink signal is associated with a carrier frequency at which the first RS is received, or the modulated carrier frequency of the uplink signal is unassociated with a carrier frequency at which the second RS is received; and

- transmitting the uplink signal at the determined modulated carrier frequency.

10. An information transmission apparatus, comprising:

- a first transmitting unit, configured to transmit first information to a terminal, wherein the first information indicates a first Transmission Configuration Indication-State (TCI-State) and a second TCI-state, the first TCI-State indicates a first Reference Signal (RS) and the second TCI-State indicates a second RS, the first RS is corresponding to QCL-TypeA {Doppler

shift, Doppler spread, average delay, delay spread}, and the second RS is corresponding to the QCL-TypeA {Doppler shift, Doppler spread, average delay, delay spread} but by means of pre-configuration or signaling indication, the second RS is not associated with Doppler shift and Doppler spread or the second RS is not considered regarding the Doppler shift and the Doppler spread.

11. An information transmission apparatus, comprising:

a first receiving unit, configured to receive first information transmitted by a network side, wherein the first information indicates a first Transmission Configuration Indication-State (TCI-State) and a second TCI-state, the first TCI-State indicates a first Reference Signal (RS) and the second TCI-State indicates a second RS, the first RS is corresponding to QCL-TypeA {Doppler shift, Doppler spread, average delay, delay spread}, and the second RS is corresponding to the QCL-TypeA {Doppler shift, Doppler spread, average delay, delay spread} but by means of pre-configuration or signaling indication, the second RS is not associated with Doppler shift and Doppler spread or the second RS is not considered regarding the Doppler shift and the Doppler spread.

12. A network device, comprising: a first communication interface and a first processor; wherein,

the first communication interface is configured to transmit first information to a terminal, wherein the first information indicates a first Transmission Configuration Indication-State (TCI-State) and a second TCI-state, the first TCI-State indicates a first Reference Signal (RS) and the second TCI-State indicates a second RS, the first RS is corresponding to QCL-TypeA {Doppler shift, Doppler spread, average delay, delay spread}, and the second RS is corresponding to the QCL-TypeA {Doppler shift, Doppler spread, average delay, delay spread} but by means of pre-configuration or signaling indication, the second RS is not associated with Doppler shift and Doppler spread or the second RS is not considered regarding the Doppler shift and the Doppler spread.

13. A terminal, comprising: a second communication interface and a second processor; wherein,

the second communication interface is configured to receive first information transmitted by a network side, wherein the first information indicates a first Transmission Configuration Indication-State (TCI-State) and a second TCI-state, the first TCI-State indicates

a first Reference Signal (RS) and the second TCI-State indicates a second RS, the first RS is corresponding to QCL-TypeA {Doppler shift, Doppler spread, average delay, delay spread}, and the second RS is corresponding to the QCL-TypeA {Doppler shift, Doppler spread, average delay, delay spread} but by means of pre-configuration or signaling indication, the second RS is not associated with Doppler shift and Doppler spread or the second RS is not considered regarding the Doppler shift and the Doppler spread.

14. A network device, comprising: a first processor and a first memory configured to store a computer program runnable on the processor,

wherein the first processor is configured to execute the steps of the method of any one of claims 1-4 when running the computer program.

15. A terminal, comprising: a second processor and a second memory configured to store a computer program runnable on the processor,

wherein the second processor is configured to execute the steps of the method of any one of claims 5-9 when running the computer program.

16. A storage medium on which a computer program is stored, the computer program, when executed by a processor, implementing the steps of the method of any one of claims 1-4, or implementing the steps of the method of any one of claims 5-9.