

What we claim is:

1. A wireless communication method, comprising:

determining, by a terminal device, at least one time domain resource unit occupied for performing Sounding Reference Signal (SRS) transmission on an SRS resource;

5 determining, by the terminal device, a resource utilization scheme used for transmitting an SRS on the at least one time domain resource unit;

performing, by the terminal device, the SRS transmission on the at least one time domain resource unit according to the determined resource utilization scheme;

10 wherein, the at least one time domain resource unit is multiple Orthogonal Frequency Division Multiplexing (OFDM) symbols, and the resource utilization scheme indicates whether frequency domain resource is switched on the at least one time domain resource unit; wherein the resource utilization scheme comprises:

15 when the frequency domain resource is switched on the at least one time domain resource unit, performing resource hopping on frequency domain resources in the at least one time domain resource unit;

when the frequency domain resource is not switched on the at least one time domain resource unit, performing transmission with adopting a same beam and a same frequency domain resource in the at least one time domain resource unit.

20 2. The method according to claim 1, wherein the resource utilization scheme is a scheme by which the terminal device utilizes a frequency domain resource, a transmit antenna and/or a transmit beam in case of performing the SRS transmission on the at least one time domain resource unit.

3. The method according to claim 2, wherein a mode of utilizing the frequency domain resource, the transmit antenna and/or the transmit beam comprises:

25 a switching mode of at least one of the frequency domain resource, the transmit antenna or the transmit beam in the at least one time domain resource unit.

4. The method according to claim 2, wherein a mode of utilizing the frequency domain resource, the transmit antenna and/or the transmit beam indicates:

whether at least one of the transmit antenna or the transmit beam is switched on the at least one time domain resource unit.

5. The method according to claim 1 or 2, wherein the resource utilization scheme comprises:

- 5 switching a transmit antenna in the at least one time domain resource unit; or,
switching a transmit beam in the at least one time domain resource unit.

6. The method according to claim 5, wherein switching the transmit antenna in the at least one time domain resource unit comprises:

- 10 switching the transmit antenna within a same antenna panel in the at least one time domain resource unit; or
performing switching between different antenna panels in the at least one time domain resource unit.

7. The method according to any one of claims 1 to 6, wherein determining, by the terminal device, the resource utilization scheme used for transmitting the SRS in the at least one time domain resource unit, comprises:

determining, by the terminal device, the resource utilization scheme according to a parameter configuration of the SRS resource.

8. The method according to claim 7, wherein the parameter configuration of the SRS resource comprises a configuration of the resource utilization scheme by the network device for transmitting the SRS on the at least one time domain resource unit;

determining, by the terminal device, the resource utilization scheme according to the parameter configuration of the SRS resource, comprises:

25 determining, by the terminal device, the resource utilization scheme according to the configuration of the resource utilization scheme by the network device for transmitting the SRS on the at least one time domain resource unit.

9. The method according to claim 7, wherein determining, by the terminal device, the resource utilization scheme according to the parameter configuration of the SRS resource, comprises:

determining, by the terminal device, the resource utilization scheme according to a configuration of at least one of the following:

- a transmission bandwidth of the SRS resource;
- a quantity of antenna ports for performing the SRS transmission on the SRS resource;
- 5 a quantity of the at least one time domain resource unit occupied by the SRS resource;
- a persistent scheme of transmitting the SRS on the SRS resource;
- an SRS resource hopping configuration of the SRS resource;
- an interval of subcarriers occupied for transmitting the SRS on the SRS resource;
- an SRS type of the SRS resource.

10 10. The method according to claim 9, wherein the persistent scheme of transmitting the SRS on the SRS resource comprises:

a periodic transmission scheme, a semi-persistent transmission scheme or an aperiodic transmission scheme.

15 11. The method according to claim 9 or 10, wherein the SRS type of the SRS resource is:
an SRS for Channel State Information (CSI) measurement; or
an SRS for beam management.

12. The method according to any one of claims 9 to 11, wherein,
in case that the quantity of antenna ports for performing the SRS transmission on the SRS resource is less than a first predetermined value, the determined resource utilization scheme is
20 switching a transmit antenna in the at least one time domain resource unit; or

in case that the quantity of antenna ports for performing the SRS transmission on the SRS resource is greater than or equal to a second predetermined value, the determined resource utilization scheme is not switching a transmit antenna in the at least one time domain resource unit.

25 13. The method according to any one of claims 9 to 12, wherein in case that a value of the SRS resource hopping configuration of the SRS resource is a first value, the determined resource utilization scheme is performing resource hopping on frequency domain resources in

the at least one time domain resource unit; or

in case that a value of the SRS resource hopping configuration of the SRS resource is not the first value, the determined resource utilization scheme is:

switching a transmit antenna in the at least one time domain resource unit; or,

5 switching a transmit beam in the at least one time domain resource unit; or,

performing transmission with adopting a same beam and a same frequency domain resource in the at least one time domain resource unit.

14. A wireless communication method, comprising:

10 determining, by a network device, at least one time domain resource unit for performing Sounding Reference Signal (SRS) reception on an SRS resource;

determining, by the network device, a resource utilization scheme used by a terminal device to transmit an SRS in the at least one time domain resource unit;

receiving, by the network device, the SRS transmitted by the terminal device on the at least one time domain resource unit according to the determined resource utilization scheme;

15 wherein the at least one time domain resource unit is multiple Orthogonal Frequency Division Multiplexing (OFDM) symbols, and the resource utilization scheme indicates whether frequency domain resource is switched on the at least one time domain resource unit; wherein the resource utilization scheme comprises:

20 when the frequency domain resource is switched on the at least one time domain resource unit, performing resource hopping on frequency domain resources in the at least one time domain resource unit;

when the frequency domain resource is not switched on the at least one time domain resource unit, performing transmission with adopting a same beam and a same frequency domain resource in the at least one time domain resource unit.

25 15. The method according to claim 14, wherein the resource utilization scheme is a scheme by which the terminal device utilizes a frequency domain resource, a transmit antenna and/or a transmit beam in case of performing SRS transmission on the at least one time domain resource unit.

16. The method according to claim 15, wherein a mode of utilizing the frequency domain resource, the transmit antenna and/or the transmit beam indicates:

whether at least one of the frequency domain resource, the transmit antenna or the transmit beam is switched in the at least one time domain resource unit.

5 17. The method according to claim 14 or 15, the resource utilization scheme comprises:
switching a transmit antenna in the at least one time domain resource unit; or,
switching a transmit beam in the at least one time domain resource unit.

18. A terminal device, comprising a processing unit and a communication unit; wherein,
the processing unit is used for determining at least one time domain resource unit
10 occupied for performing Sounding Reference Signal (SRS) transmission on an SRS resource;
determining a resource utilization scheme used for transmitting an SRS on the at least one time
domain resource unit;

the communication unit is used for performing the SRS transmission on the at least one
time domain resource unit according to the resource utilization scheme determined by the
15 processing unit;

wherein, the at least one time domain resource unit is multiple Orthogonal Frequency
Division Multiplexing (OFDM) symbols, and the resource utilization scheme indicates whether
frequency domain resource is switched on the at least one time domain resource unit; wherein
the resource utilization scheme comprises:

20 when the frequency domain resource is switched on the at least one time domain resource
unit, performing resource hopping on frequency domain resources in the at least one time
domain resource unit;

when the frequency domain resource is not switched on the at least one time domain
resource unit, performing transmission with adopting a same beam and a same frequency
25 domain resource in the at least one time domain resource unit.

19. A network device, comprising: a processing unit and a communication unit; wherein
the processing unit is used for determining at least one time domain resource unit for
performing Sounding Reference Signal (SRS) reception on an SRS resource; determining a

resource utilization scheme used by the terminal device to transmit an SRS in the at least one time domain resource unit;

the communication unit is used for receiving the SRS transmitted by the terminal device on the at least one time domain resource unit according to the resource utilization scheme
5 determined by the processing unit;

wherein, the at least one time domain resource unit is multiple Orthogonal Frequency Division Multiplexing (OFDM) symbols, and the resource utilization scheme indicates whether frequency domain resource is switched on the at least one time domain resource unit; wherein the resource utilization scheme comprises:

10 when the frequency domain resource is switched on the at least one time domain resource unit, performing resource hopping on frequency domain resources in the at least one time domain resource unit;

when the frequency domain resource is not switched on the at least one time domain resource unit, performing transmission with adopting a same beam and a same frequency
15 domain resource in the at least one time domain resource unit.