CLAIMS

What is claimed is:

1. A communication method, wherein the method comprises:

receiving first information, wherein the first information indicates a sounding reference signal SRS frequency domain resource, the SRS frequency domain resource comprises a first frequency domain unit and a second frequency domain unit, the first frequency domain unit is different from the second frequency domain unit, the first frequency domain unit is a frequency domain resource occupied by an SRS on a first frequency hopping subband in a first frequency hopping period, the second frequency domain unit is a frequency domain resource occupied by the SRS on the first frequency hopping subband in a second frequency hopping period, and the first frequency hopping subband is one of a plurality of frequency hopping subbands, wherein the first frequency hopping subband consists of four frequency domain units, and each frequency hopping period of four consecutive frequency hopping periods occupies a different one of the four frequency domain units; and

sending the SRS in each frequency hopping period in a frequency hopping manner on the plurality of frequency hopping subbands based on the first information.

2. The method according to claim 1, wherein the first frequency domain unit is less than a frequency domain resource occupied by the first frequency hopping subband.

3. The method according to claim 1 or 2, wherein the SRS frequency domain resource comprises a third frequency domain unit, the third frequency domain unit is a frequency domain resource occupied by the SRS on a second frequency hopping subband in the first frequency hopping period, and the second frequency hopping subband is a frequency hopping subband that is in the plurality of frequency hopping subbands and that is different from the first frequency hopping subband; and

a frequency domain offset of a starting position of the first frequency domain unit relative to a starting position of the first frequency hopping subband is the same as a frequency domain offset of a starting position of the third frequency domain unit relative to a starting position of the second frequency hopping subband.

4. The method according to claim 1 to 3, wherein the frequency domain offset of the starting position of the first frequency domain unit relative to the starting position of the first frequency

hopping subband differs from a frequency domain offset of a starting position of the second frequency domain unit relative to the starting position of the first frequency hopping subband by N frequency domain units, a frequency domain width occupied by the N frequency domain units is less than a bandwidth of the first frequency hopping subband, and N is a positive integer.

5. The method according to any one of claims 1 to 4, wherein the four frequency domain units are a frequency domain unit 1, a frequency domain unit 2, a frequency domain unit 3, and a frequency domain unit 4 in a frequency domain sequence; and

in the four consecutive frequency hopping periods, an SRS frequency domain resource occupation manner on the first frequency hopping subband is any one of the following:

the four consecutive frequency hopping periods successively occupy the frequency domain unit 1, the frequency domain unit 3, the frequency domain unit 2, and the frequency domain unit 4;

the four consecutive frequency hopping periods successively occupy the frequency domain unit 2, the frequency domain unit 4, the frequency domain unit 1, and the frequency domain unit 3;

the four consecutive frequency hopping periods successively occupy the frequency domain unit 3, the frequency domain unit 2, the frequency domain unit 4, and the frequency domain unit 1; and

the four consecutive frequency hopping periods successively occupy the frequency domain unit 4, the frequency domain unit 1, the frequency domain unit 3, and the frequency domain unit 2.

6. A communication method, wherein the method comprises:

sending first information, wherein the first information indicates an SRS frequency domain resource, the SRS frequency domain resource comprises a first frequency domain unit and a second frequency domain unit, the first frequency domain unit is different from the second frequency domain unit, the first frequency domain unit is a frequency domain resource occupied by an SRS on a first frequency hopping subband in a first frequency hopping period, the second frequency domain unit is a frequency domain resource occupied by the SRS on the first frequency hopping subband in a second frequency hopping period, and the first frequency hopping subband is one of a plurality of frequency hopping subbands, wherein the first frequency hopping subband consists of four frequency domain units, and each frequency hopping period of four consecutive frequency

hopping periods occupies a different one of the four frequency domain units; and

receiving the SRS in each frequency hopping period in a frequency hopping manner on the plurality of frequency hopping subbands based on the first information.

7. The method according to claim 6, wherein the first frequency domain unit is less than a frequency domain resource occupied by the first frequency hopping subband.

8. The method according to claim 6 to 7, wherein the SRS frequency domain resource comprises a third frequency domain unit, the third frequency domain unit is a frequency domain resource occupied by the SRS on a second frequency hopping subband in the first frequency hopping period, and the second frequency hopping subband is a frequency hopping subband that is in the plurality of frequency hopping subbands and that is different from the first frequency hopping subband; and

a frequency domain offset of a starting position of the first frequency domain unit relative to a starting position of the first frequency hopping subband is the same as a frequency domain offset of a starting position of the third frequency domain unit relative to a starting position of the second frequency hopping subband.

9. The method according to any one of claims 6 to 8, wherein the frequency domain offset of the starting position of the first frequency domain unit relative to the starting position of the first frequency hopping subband differs from a frequency domain offset of a starting position of the second frequency domain unit relative to the starting position of the first frequency hopping subband by N frequency domain units, a frequency domain width occupied by the N frequency domain units is less than a bandwidth of the first frequency hopping subband, and N is a positive integer.

10. The method according to any one of claims 6 to 9, wherein the four frequency domain units are a frequency domain unit 1, a frequency domain unit 2, a frequency domain unit 3, and a frequency domain unit 4 in a frequency domain sequence; and

in the four consecutive frequency hopping periods, an SRS frequency domain resource occupation manner on the first frequency hopping subband is any one of the following:

the four consecutive frequency hopping periods successively occupy the frequency domain unit 1, the frequency domain unit 3, the frequency domain unit 2, and the frequency domain unit 4;

the four consecutive frequency hopping periods successively occupy the frequency domain

unit 2, the frequency domain unit 4, the frequency domain unit 1, and the frequency domain unit 3;

the four consecutive frequency hopping periods successively occupy the frequency domain unit 3, the frequency domain unit 2, the frequency domain unit 4, and the frequency domain unit 1; and

the four consecutive frequency hopping periods successively occupy the frequency domain unit 4, the frequency domain unit 1, the frequency domain unit 3, and the frequency domain unit 2.

11. A communication apparatus, wherein the apparatus comprises a processing unit and a transceiver unit; and

the processing unit invokes the transceiver unit to:

receive first information, wherein the first information indicates an SRS frequency domain resource, the SRS frequency domain resource comprises a first frequency domain unit and a second frequency domain unit, the first frequency domain unit is different from the second frequency domain unit, the first frequency domain unit is a frequency domain resource occupied by an SRS on a first frequency hopping subband in a first frequency hopping period, the second frequency domain unit is a frequency domain resource occupied by the SRS on the first frequency hopping subband in a second frequency hopping period, and the first frequency hopping subband is one of a plurality of frequency hopping subbands, wherein the first frequency hopping subband consists of four frequency domain units, and each frequency hopping period of four consecutive frequency hopping periods occupies a different one of the four frequency domain units; and

send the SRS in each frequency hopping period in a frequency hopping manner on the plurality of frequency hopping subbands based on the first information.

12. The apparatus according to claim 11, wherein the first frequency domain unit is less than a frequency domain resource occupied by the first frequency hopping subband.

13. The apparatus according to claim 11 or 12, wherein the SRS frequency domain resource comprises a third frequency domain unit, the third frequency domain unit is a frequency domain resource occupied by the SRS on a second frequency hopping subband in the first frequency hopping period, and the second frequency hopping subband is a frequency hopping subband that is in the plurality of frequency hopping subbands and that is different from the first frequency hopping subband; and

a frequency domain offset of a starting position of the first frequency domain unit relative to a starting position of the first frequency hopping subband is the same as a frequency domain offset of a starting position of the third frequency domain unit relative to a starting position of the second frequency hopping subband.

14. The apparatus according to any one of claims 11 to 13, wherein the frequency domain offset of the starting position of the first frequency domain unit relative to the starting position of the first frequency hopping subband differs from a frequency domain offset of a starting position of the second frequency domain unit relative to the starting position of the first frequency hopping subband by N frequency domain units, a frequency domain width occupied by the N frequency domain units is less than a bandwidth of the first frequency hopping subband, and N is a positive integer.

15. The apparatus according to any one of claims 11 to 14, wherein the four frequency domain units are a frequency domain unit 1, a frequency domain unit 2, a frequency domain unit 3, and a frequency domain unit 4 in a frequency domain sequence; and

in the four consecutive frequency hopping periods, an SRS frequency domain resource occupation manner on the first frequency hopping subband is any one of the following:

the four consecutive frequency hopping periods successively occupy the frequency domain unit 1, the frequency domain unit 3, the frequency domain unit 2, and the frequency domain unit 4;

the four consecutive frequency hopping periods successively occupy the frequency domain unit 2, the frequency domain unit 4, the frequency domain unit 1, and the frequency domain unit 3;

the four consecutive frequency hopping periods successively occupy the frequency domain unit 3, the frequency domain unit 2, the frequency domain unit 4, and the frequency domain unit 1; and

the four consecutive frequency hopping periods successively occupy the frequency domain unit 4, the frequency domain unit 1, the frequency domain unit 3, and the frequency domain unit 2.

16. A communication apparatus, wherein the apparatus comprises a processing unit and a transceiver unit;

the processing unit invokes the transceiver unit to:

send first information, wherein the first information indicates an SRS frequency domain resource, the SRS frequency domain resource comprises a first frequency domain unit and a second frequency domain unit, the first frequency domain unit is different from the second frequency domain unit, the first frequency domain unit is a frequency domain resource occupied by an SRS on a first frequency hopping subband in a first frequency hopping period, the second frequency domain unit is a frequency domain resource occupied by the SRS on the first frequency hopping subband in a second frequency hopping period, and the first frequency hopping subband is one of a plurality of frequency hopping subbands, wherein the first frequency hopping subband consists of four frequency domain units, and each frequency hopping period of four consecutive frequency hopping periods occupies a different one of the four frequency domain units; and

receive the SRS in each frequency hopping period in a frequency hopping manner on the plurality of frequency hopping subbands based on the first information.

17. The apparatus according to claim 16, wherein the first frequency domain unit is less than a frequency domain resource occupied by the first frequency hopping subband.

18. The apparatus according to claim 16 to 17, wherein the SRS frequency domain resource comprises a third frequency domain unit, the third frequency domain unit is a frequency domain resource occupied by the SRS on a second frequency hopping subband in the first frequency hopping period, and the second frequency hopping subband is a frequency hopping subband that is in the plurality of frequency hopping subbands and that is different from the first frequency hopping subband; and

a frequency domain offset of a starting position of the first frequency domain unit relative to a starting position of the first frequency hopping subband is the same as a frequency domain offset of a starting position of the third frequency domain unit relative to a starting position of the second frequency hopping subband.

19. The apparatus according to any one of claims 16 to 18, wherein the frequency domain offset of the starting position of the first frequency domain unit relative to the starting position of the first frequency hopping subband differs from a frequency domain offset of a starting position of the second frequency domain unit relative to the starting position of the first frequency hopping subband by N frequency domain units, a frequency domain width occupied by the N frequency domain units is less than a bandwidth of the first frequency hopping subband, and N is a positive integer.

20. The apparatus according to any one of claims 16 to 19, wherein the four frequency domain units are a frequency domain unit 1, a frequency domain unit 2, a frequency domain unit 3, and a frequency domain unit 4 in a frequency domain sequence; and

in the four consecutive frequency hopping periods, an SRS frequency domain resource occupation manner on the first frequency hopping subband is any one of the following:

the four consecutive frequency hopping periods successively occupy the frequency domain unit 1, the frequency domain unit 3, the frequency domain unit 2, and the frequency domain unit 4;

the four consecutive frequency hopping periods successively occupy the frequency domain unit 2, the frequency domain unit 4, the frequency domain unit 1, and the frequency domain unit 3;

the four consecutive frequency hopping periods successively occupy the frequency domain unit 3, the frequency domain unit 2, the frequency domain unit 4, and the frequency domain unit 1; and

the four consecutive frequency hopping periods successively occupy the frequency domain unit 4, the frequency domain unit 1, the frequency domain unit 3, and the frequency domain unit 2.

21. A communication apparatus, comprising a processor and an interface circuit, wherein the interface circuit is configured to: receive a signal from another communication apparatus other than the communication apparatus and transmit the signal to the processor, or send a signal from the processor to another communication apparatus other than the communication apparatus, and the processor is configured to implement the method according to any one of claims 1 to 5 or 6 to 10 by using a logic circuit or by executing code instructions.

22. A computer-readable storage medium, wherein the storage medium stores a computer program or instructions, and when the computer program or the instructions is/are executed by a communication apparatus, the method according to any one of claims 1 to 5 or 6 to 10 is implemented.

23. A communication system, wherein the communication system comprises the communication apparatus according to any one of claims 11 to 15, and the communication apparatus according to any one of claims 16 to 20.