

CLAIMS

1. A communication method, wherein the method comprises:

sending, by a network device, a first signal to a first device on a first frequency band, wherein the first frequency band comprises a downlink frequency band of a licensed frequency division duplex FDD spectrum, and the first signal is used to supply energy to the first device; and

receiving, by the network device, a second signal from the first device on a second frequency band or a third frequency band, wherein the second signal comprises uplink data, the second frequency band comprises an uplink frequency band of the licensed frequency division duplex FDD spectrum, and the third frequency band comprises a frequency band of an unlicensed spectrum.

2. The method according to claim 1, wherein the sending, by a network device, a first signal to a first device on a first frequency band comprises:

sending, by the network device, the first signal to the first device in a first time period of the first frequency band and the second frequency band, or sending, by the network device, the first signal to the first device in a second time period of the first frequency band and the third frequency band.

3. The method according to claim 1 or 2, wherein the receiving, by the network device, a second signal from the first device on a second frequency band or a third frequency band comprises:

sending, by the network device, first indication information to a second device, wherein the first indication information indicates the second device to send a first carrier signal to the first device on the second frequency band, and the first carrier signal is used by the first device to send the second signal to the network device; and

receiving, by the network device, the second signal from the first device on the second frequency band.

4. The method according to claim 1 or 2, wherein the receiving, by the network device, a second signal from the first device on a second frequency band or a third frequency band comprises:

sending, by the network device, second indication information to a third device, wherein the second indication information indicates the third device to send a third carrier signal to the first device on the second frequency band or the third frequency band, and the third carrier signal is used by the first device to send the second signal to the network device; and

receiving, by the network device, the second signal from the first device on the second frequency band or the third frequency band.

5. The method according to claim 3, wherein the first indication information comprises at least one of a start moment for sending the first carrier signal, duration for sending the first carrier

signal, and power for sending the first carrier signal.

6. The method according to claim 4, wherein the second indication information comprises at least one of a start moment for sending the third carrier signal, duration for sending the third carrier signal, and power for sending the third carrier signal.

7. The method according to claim 1 or 2, wherein the receiving, by the network device, a second signal from the first device on a second frequency band or a third frequency band comprises: sending, by the network device, a second carrier signal to the first device on the second frequency band or the third frequency band, wherein the second carrier signal is used by the first device to send the second signal to the network device; and

receiving, by the network device, the second signal from the first device on the second frequency band or the third frequency band.

8. The method according to claim 7, wherein power of the second carrier signal sent by the network device is less than power of the first signal sent by the network device.

9. The method according to any one of claims 1 to 8, wherein the method further comprises: sending, by the network device, a third signal to the first device on the first frequency band or the third frequency band, wherein the third signal is used to request the first device to send the second signal.

10. A communication method, wherein the method comprises: receiving, by a first device, a first signal from a network device on a first frequency band, wherein the first frequency band comprises a downlink frequency band of a licensed frequency division duplex FDD spectrum, and the first signal is used to supply energy to the first device; and sending, by the first device, a second signal to the network device on a second frequency band or a third frequency band, wherein the second signal comprises uplink data, the second frequency band comprises an uplink frequency band of the licensed frequency division duplex FDD spectrum, and the third frequency band comprises a frequency band of an unlicensed spectrum.

11. The method according to claim 10, wherein the receiving, by a first device, a first signal from a network device on a first frequency band comprises:

receiving, by the first device, the first signal from the network device in a first time period of the first frequency band and the second frequency band, or receiving, by the first device, the first signal from the network device in a second time period of the first frequency band and the third frequency band.

12. The method according to claim 10 or 11, wherein the method further comprises: receiving, by the first device, a first carrier signal from a second device on the second frequency band, wherein the first carrier signal is used by the first device to send the second signal to the network device.

13. The method according to claim 10 or 11, wherein the method further comprises:

receiving, by the first device, a third carrier signal from a third device on the second frequency band or the third frequency band, wherein the third carrier signal is used by the first device to send the second signal to the network device on the second frequency band or the third frequency band.

5 14. The method according to claim 10 or 11, wherein the sending, by the first device, a second signal to the network device on a second frequency band or a third frequency band comprises:

receiving, by the first device, a second carrier signal from the network device on the second frequency band or the third frequency band, wherein the second carrier signal is used by the first device to send the second signal to the network device.

10 15. The method according to claim 14, wherein power of the second carrier signal is less than power of the first signal.

16. The method according to any one of claims 10 to 15, wherein the method further comprises:

15 receiving, by the first device, a third signal from the network device on the first frequency band or the third frequency band, wherein the third signal is used to request the first device to send the second signal.

17. A communication apparatus, comprising:

20 a processor, wherein the processor is coupled to a storage, the storage is configured to store a program or instructions, and when the program or the instructions are executed by the processor, the apparatus is enabled to perform the communication method according to any one of claims 1 to 9.

18. A communication apparatus, comprising:

25 a processor, wherein the processor is coupled to a storage, the storage is configured to store a program or instructions, and when the program or the instructions are executed by the processor, the apparatus is enabled to perform the communication method according to any one of claims 10 to 16.

30 19. A computer-readable storage medium, wherein the computer-readable storage medium stores a computer program, and when the computer program is run on a computer, the computer is enabled to perform the communication method according to any one of claims 1 to 9 or any one of claims 10 to 16.

20. A communication system, comprising a network device and a first device, wherein the network device is configured to perform the method according to any one of claims 1 to 9, and the first device is configured to perform the method according to any one of claims 10 to 16.