CLAIMS

What is claimed is:

1. A communication method, wherein the method comprises:

generating, by a first device, a first frame, wherein the first frame comprises a first field and a second field, the first field indicates a duration of a first time resource, the second field is used to determine a purpose of the first time resource, and the purpose of the first time resource comprises: the first time resource is used to transmit a single-user physical layer protocol data unit PPDU, or the first time resource is used to perform frame exchange; and

sending, by the first device, the first frame to a second device.

2. The method according to claim 1, wherein when the first time resource is used to transmit the single-user PPDU, a duration of the single-user PPDU is equal to the duration of the first time resource.

3. The method according to claim 1 or 2, wherein that the second field is used to determine the purpose of the first time resource comprises the following cases:

when the second field is set to a first preset value, the second field is used to determine that the first time resource is used to transmit the single-user PPDU; or

when the second field is set to a second preset value, the second field is used to determine that the first time resource is used to perform frame exchange.

4. The method according to claim 1 or 2, wherein that the second field is used to determine the purpose of the first time resource comprises the following cases:

when the second field is set to a first preset value, the second field is used to determine that the first time resource is used to transmit the single-user PPDU; or

when the second field is set to a second preset value, the second field is used to determine that the first time resource is used by a cooperation device to perform frame exchange, and the cooperation device and the first device do not belong to a same basic service set; or

when the second field is set to a third preset value, the second field is used to determine that the first time resource is used by a peer-to-peer station to perform frame exchange.

5. The method according to any one of claims 1 to 4, wherein the first frame further comprises a trigger type field, and a value of the trigger type field is any one of 8 to 15.

6. The method according to any one of claims 1 to 4, wherein the first frame is a basic basic

trigger frame, and a B63 bit in the basic trigger frame is set to 1.

7. The method according to claim 5 or 6, wherein the first field and the second field are located in a common information field or a user information field of the first frame.

8. The method according to any one of claims 1 to 4, wherein the first frame further comprises an A-control control field, the A-control field comprises a control identifier field and a control information field, a value of the control identifier field is any one of 7 to 14, and the first field and the second field are located in the control information field.

9. The method according to any one of claims 1 to 4, wherein the first frame further comprises a triggered response scheduling TRS A-control control field, and the A-control field comprises a TRS control field, the TRS control field comprises the first field and the second field, and a reserved bit in the TRS control field is set to 1.

10. The method according to any one of claims 1 to 9, wherein the method further comprises:

receiving, by the first device, a response frame sent by the second device, wherein the response frame comprises a third field, and the third field indicates whether the second device accepts the first time resource.

11. The method according to any one of claims 1 to 9, wherein the method further comprises:

receiving, by the first device, a first radio frame sent by the second device on the first time resource, wherein a modulation and coding scheme MCS used to send the radio frame is less than or equal to a maximum MCS supported by the first device.

12. The method according to any one of claims 1 to 11, wherein the method further comprises:

receiving, by the first device, buffer status information sent by the second device, wherein the buffer status information indicates a buffer data amount.

13. The method according to claim 12, wherein when the second device is a cooperation device, the buffer data amount comprises one or more of the following: a total uplink buffer data amount, a total downlink buffer data amount, or a sum of the total uplink buffer data amount and the total downlink buffer data amount; and the total uplink buffer data amount is a sum of uplink buffer data amounts of one or more stations associated with the second device, and the total downlink buffer data amount is a sum of downlink buffer data amounts of the one or more stations associated with the second device.

14. The method according to claim 12, wherein when the second device is a peer-to-peer station, the buffer data amount is a sum of buffer data amounts on one or more P2P links

established by the second device.

15. A communication method, wherein the method comprises:

receiving, by a second device, a first frame sent by a first device, wherein the first frame comprises a first field and a second field, the first field indicates a duration of a first time resource, the second field is used to determine a purpose of the first time resource, and the purpose of the first time resource comprises: the first time resource is used to transmit a single-user physical layer protocol data unit PPDU, or the first time resource is used to perform frame exchange; and

parsing, by the second device, the first frame.

16. The method according to claim 15, wherein when the first time resource is used to transmit the single-user PPDU, a duration of the single-user PPDU is equal to the duration of the first time resource.

17. The method according to claim 15 or 16, wherein that the second field is used to determine the purpose of the first time resource comprises the following cases:

when the second field is set to a first preset value, the second field is used to determine that the first time resource is used to transmit the single-user PPDU; or

when the second field is set to a second preset value, the second field is used to determine that the first time resource is used to perform frame exchange.

18. The method according to claim 15 or 16, wherein that the second field is used to determine the purpose of the first time resource comprises the following cases:

when the second field is set to a first preset value, the second field is used to determine that the first time resource is used to transmit the single-user PPDU; or

when the second field is set to a second preset value, the second field is used to determine that the first time resource is used by a cooperation device to perform frame exchange, and the cooperation device and the first device do not belong to a same basic service set; or

when the second field is set to a third preset value, the second field is used to determine that the first time resource is used by a peer-to-peer station to perform frame exchange.

19. The method according to any one of claims 15 to 18, wherein the first frame further comprises a trigger type field, and a value of the trigger type field is any one of 8 to 15.

20. The method according to any one of claims 15 to 18, wherein the first frame is a basic basic trigger frame, and a B63 bit in the basic trigger frame is set to 1.

21. The method according to claim 19 or 20, wherein the first field and the second field are

located in a common information field or a user information field of the first frame.

22. The method according to any one of claims 15 to 18, wherein the first frame further comprises an A-control control field, the A-control field comprises a control identifier field and a control information field, a value of the control identifier field is any one of 7 to 14, and the first field and the second field are located in the control information field.

23. The method according to any one of claims 15 to 18, wherein the first frame further comprises a triggered response scheduling TRS A-control control field, and the A-control field comprises a TRS control field, the TRS control field comprises the first field and the second field, and a reserved bit in the TRS control field is set to 1.

24. The method according to any one of claims 15 to 23, wherein the method further comprises:

sending, by the second device, a response frame to the first device, wherein the response frame comprises a third field, and the third field indicates whether the second device accepts the first time resource.

25. The method according to any one of claims 15 to 23, wherein the method further comprises:

sending, by the second device, a first radio frame on the first time resource, wherein an MCS used to send the radio frame is less than or equal to a maximum MCS supported by the first device.

26. The method according to any one of claims 15 to 25, wherein the method further comprises:

sending, by the second device, buffer status information to the first device, wherein the buffer status information indicates a buffer data amount.

27. The method according to claim 26, wherein when the second device is a cooperation device, the buffer data amount comprises one or more of the following: a total uplink buffer data amount, a total downlink buffer data amount, or a sum of the total uplink buffer data amount and the total downlink buffer data amount; and the total uplink buffer data amount is a sum of uplink buffer data amounts of one or more stations associated with the second device, and the total downlink buffer data amount is a sum of downlink buffer data amounts of the one or more stations associated with the second device.

28. The method according to claim 26, wherein when the second device is a peer-to-peer station, the buffer data amount is a sum of buffer data amounts on one or more P2P links

established by the second device.

29. A communication apparatus, wherein the communication apparatus comprises units configured to perform steps in the method according to any one of claims 1 to 28.

30. A computer-readable storage medium, wherein the computer-readable storage medium stores computer instructions, and when the computer instructions are run on a computer, the computer is enabled to perform the method according to any one of claims 1 to 28.

31. A chip, wherein the chip comprises a processing unit and a transceiver pin, wherein the processing unit is configured to perform a processing operation in the method according to any one of claims 1 to 28, and the transceiver pin is configured to perform a communication operation in the method according to any one of claims 1 to 28.