

CLAIMS

What is claimed is:

1. A trigger frame transmission method, comprising:

5 sending, by an access point AP, a trigger frame, wherein the trigger frame is used for triggering a station to send an extremely high throughput trigger based physical layer protocol data unit EHT TB PPDU, and the trigger frame further comprises a U-SIG reserved indication field indicating a value of a U-SIG reserved field in the EHT TB PPDU; and

10 receiving, by the AP, the EHT TB PPDU sent by the station, wherein the value of the U-SIG reserved field in a universal signal field U-SIG of the EHT TB PPDU is determined based on a value of the U-SIG reserved indication field in the trigger frame;

wherein the U-SIG reserved indication field is located in a special user information field in a user information list field of the trigger frame;

wherein a common information field of the trigger frame comprises a special user presence indicator subfield, indicating that the special user information field exists; and

15 wherein an HE/EHT subfield indicating an EHT STA to send the EHT TB PPDU is set in the common information field of the trigger frame and is separate from the special user presence indicator subfield.

2. A communication apparatus used in a wireless local area network WLAN, comprising:

20 a processor, configured to generate a trigger frame, wherein the trigger frame is used for triggering a station to send an extremely high throughput trigger based physical layer protocol data unit EHT TB PPDU, and the trigger frame further comprises a U-SIG reserved indication field indicating a value of a U-SIG reserved field in the EHT TB PPDU; and

a transceiver, configured to send the trigger frame, wherein

the transceiver is further configured to receive the EHT TB PPDU sent by the station,

25 wherein the U-SIG reserved indication field is located in a special user information field in a user information list field of the trigger frame;

wherein a common information field of the trigger frame comprises a special user presence indicator subfield, indicating that the special user information field exists; and

30 wherein an HE/EHT subfield indicating an EHT STA to send the EHT TB PPDU is set in the common information field of the trigger frame and is separate from the special user presence

indicator subfield.

3. The method or communication apparatus according to claim 2, wherein an association identifier AID12 of the special user information field is a preset value or an incomplete AID12 value.

5 4. The method or the communication apparatus according to claim 2 or 3, wherein the special user information field further comprises one UL SRP field for the U-SIG or two UL SRP fields for the U-SIG.

10 5. The method according to claims 1 to 4, or the communication apparatus according to claims 2 to 4, wherein the common information field of the trigger frame further comprises four uplink spatial reuse parameter UL SRP fields, or further comprises an uplink EHT spatial reuse parameter UL EHT SRP field in a reserved field of the common information field.

6. The method or the communication apparatus according to claim 5, wherein the U-SIG comprising an SRP1 field and an SRP2 field;

15 a value of the SRP1 field in the U-SIG is equal to any value of a UL SR1 field and a UL SR2 field in four spatial reuse fields indicated by an uplink spatial reuse field of the trigger frame; and

 a value of an SRP2 field in the U-SIG is equal to any one of a UL SR3 field and a UL SR4 field in the four spatial reuse fields indicated by the uplink spatial reuse field of the trigger frame.

20 7. The method according to claim 1 or the communication apparatus according to claim 2, wherein the communication information field of the trigger frame further comprises an uplink EHT PPDU bandwidth extension field, used together with a UL (HE) BW field to jointly indicate an uplink HE bandwidth and an uplink EHT bandwidth.

8. A physical layer protocol data unit PPDU transmission method, comprising:

25 receiving, by a station STA, a trigger frame, wherein the trigger frame is used for triggering a station to send an EHT TB PPDU, and the trigger frame further comprises a U-SIG reserved indication field indicating a value of a U-SIG reserved field in the EHT TB PPDU; and

 sending, by the STA, the EHT TB PPDU, wherein the value of the U-SIG reserved field in a universal signal field U-SIG of the EHT TB PPDU is determined based on a value of the U-SIG reserved indication field in the trigger frame,

30 wherein the U-SIG reserved indication field is located in a special user information field in a user information list field of the trigger frame;

 wherein a common information field of the trigger frame comprises a special user presence

indicator subfield, indicating that the special user information field exists; and

wherein an HE/EHT subfield indicating an EHT STA to send the EHT TB PPDU is set in the common information field of the trigger frame and is separate from the special user presence indicator subfield.

5 9. A communication apparatus used in a wireless local area network WLAN, comprising:

a transceiver, configured to receive a trigger frame, wherein the trigger frame is used for triggering a station to send an EHT TB PPDU, and the trigger frame further comprises a U-SIG reserved indication field indicating a value of a U-SIG reserved field in the EHT TB PPDU; and

10 a processor, configured to generate the EHT TB PPDU, wherein the value of the U-SIG reserved field in a universal signal field U-SIG of the EHT TB PPDU is determined based on a value of the U-SIG reserved indication field in the trigger frame, wherein

the transceiver is further configured to send the EHT TB PPDU,

wherein the U-SIG reserved indication field is located in a special user information field in a user information list field of the trigger frame;

15 wherein a common information field of the trigger frame comprises a special user presence indicator subfield, indicating that the special user information field exists; and

wherein an HE/EHT subfield indicating an EHT STA to send the EHT TB PPDU is set in the common information field of the trigger frame and is separate from the special user presence indicator subfield.

20 10. The method or communication apparatus according to claim 19, wherein an association identifier AID12 of the special user information field is a preset value or an incomplete AID12 value.

25 11. The method or the apparatus according to claim 9 or 10, wherein the special user information field further comprises one UL SRP field for the U-SIG or two UL SRP fields for the U-SIG.

12. The method according to claim 8 or the communication apparatus according to claim 9, wherein the common information field of the trigger frame further comprises four uplink spatial reuse parameter UL SRP fields, or further comprises an uplink EHT spatial reuse parameter UL EHT SRP field in a reserved field of the common information field.

30 13. A computer-readable storage medium, wherein the computer-readable storage medium stores instructions; and when the instructions are run on a computer, the computer is enabled to

perform the method according to any one of claims 1, 3-8 and 10-12.