

CLAIMS

1. A method for sending a trigger frame, wherein the method comprises:

generating, by an access point AP, a trigger frame, wherein the trigger frame comprises a first user information field corresponding to a first station STA, the first user information field comprises a first spatial stream allocation subfield and first information, the first information indicates a mode in which the first STA transmits data, the mode comprises a multi-user multiple input multiple output, MU-MIMO, mode or a non multi-user multiple input multiple output, non-MU-MIMO, mode, and spatial stream allocation information that is carried in the first spatial stream allocation subfield and that is of the first STA corresponds to content indicated in the first information; and

when the first information indicates that the first STA transmits data in an MU-MIMO mode, the spatial stream allocation information corresponding to the first STA comprises starting stream location information and first stream quantity information, wherein the starting stream location information indicates a starting location of a stream corresponding to the first STA, and the first stream quantity information indicates a quantity of streams corresponding to the first STA; or

when the first information indicates that the first STA transmits data in a non-MU-MIMO mode, the spatial stream allocation information corresponding to the first STA comprises a second stream quantity information, wherein the second stream quantity information indicates a quantity of streams corresponding to the first STA;

sending, by the AP, the trigger frame.

2. The method according to claim 1, wherein the starting stream location information occupies 4 bits, the first stream quantity information occupies 2 bits, and the second stream quantity information occupies 4 bits.

3. The method according to claim 1 or 2, wherein when the first information indicates that the first STA transmits data in an MU-MIMO mode, the first spatial stream allocation subfield occupies 6 bits; or

when the first information indicates that the first STA transmits data in a non-MU-MIMO mode, the first spatial stream allocation subfield occupies 4 bits.

4. A method for receiving a trigger frame, wherein the method comprises:

receiving, by a first station STA, a trigger frame, wherein the trigger frame comprises a first

user information field corresponding to the first STA, the first user information field comprises a first spatial stream allocation subfield and first information, the first information indicates a mode in which the first STA transmits data, the mode comprises a multi-user multiple input multiple output, MU-MIMO, mode or a non multi-user multiple input multiple output, non-MU-MIMO, mode, and a spatial stream allocation information that is carried in the first spatial stream allocation subfield and that is of the first STA corresponds to content indicated in the first information; and

when the first information indicates that the first STA transmits data in an MU-MIMO mode, the spatial stream allocation information corresponding to the first STA comprises a starting stream location information and a first stream quantity information, wherein the starting stream location information indicates a starting location of a stream corresponding to the first STA, and the first stream quantity information indicates a quantity of streams corresponding to the first STA; or

when the first information indicates that the first STA transmits data in a non-MU-MIMO mode, the spatial stream allocation information corresponding to the first STA comprises second stream quantity information, wherein the second stream quantity information indicates a quantity of streams corresponding to the first STA;

sending, by the first STA, uplink data based on information carried in the first user information field.

5. The method according to claim 4, wherein the starting stream location information occupies 4 bits, the first stream quantity information occupies 2 bits, and

the second stream quantity information occupies 4 bits.

6. The method according to claim 4 or 5, wherein when the first information indicates that the first STA transmits data in an MU-MIMO mode, the first spatial stream allocation subfield occupies 6 bits; or

when the first information indicates that the first STA transmits data in a non-MU-MIMO mode, the first spatial stream allocation subfield occupies 4 bits.

7. A wireless communication apparatus, comprising:

a unit configured to implement the method according to any one of claims 1 to 3.

8. A wireless communication apparatus, comprising: a unit configured to implement the method according to any one of claims 4 to 6.

9. A computer-readable storage medium, wherein the computer-readable storage medium stores a computer program, and when the computer program is run,

an apparatus is enabled to perform the method according to any one of claims 1 to 3, or
an apparatus is enabled to perform the method according to any one of claims 4 to 6.

10. A chip system, comprising a processor, configured to invoke a computer program from a
memory and run the computer program,

5 to enable a communication

apparatus on which the chip system is installed to perform the method according to any one
of claims 1 to 3; or

to enable a communication apparatus on which the chip system is installed to perform the
method according to any one of claims 4 to 6.

10 11. A communication system, comprising:

an access point AP, configured to perform the method according to any one of claims 1 to 3;
and

at least one station STA, configured to perform the method according to any one of claims 4
to 6.

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