CLAIMS

What is claimed is:

1. An information indication method, comprising：

generating, by an access point, AP, physical layer protocol data unit, PPDU, wherein a preamble of the PPDU comprises an U-SIG field, the U-SIG field comprises first indication information indicating a transmission mode of the PPDU, the transmission mode of the PPDU comprises any of a single-user full-bandwidth transmission, a single-user full-bandwidth punctured transmission, a full-bandwidth MU-MIMO transmission, a full-bandwidth MU-MIMO punctured transmission, and an OFDMA transmission;

sending, by the AP, the PPDU.

2. The method according to claim 1, the preamble of the PPDU comprises EHT-SIG field, the EHT-SIG field comprises a common field and a user specific field, the user specific field comprises one or more user fields, the user field comprises association identifier, AID of a station.

3. The method according to claim 2, when the first indication information indicates the single-user full-bandwidth transmission, the single-user full-bandwidth punctured transmission, the full-bandwidth MU-MIMO transmission, or the full-bandwidth MU-MIMO punctured transmission, the common field comprises no resource allocation information.

4. The method according to claim 2, when the first indication information indicates the OFDMA transmission, the common field comprises resource allocation information.

5. The method according to claim 2, when the first indication information indicates the single-user full-bandwidth punctured transmission or the single-user full-bandwidth punctured transmission, the user specific field comprises one user field.

6. The method according to claim 5, the U-SIG field comprises a bandwidth field, when a bandwidth of the PPDU indicated by the bandwidth field is greater than 20MHz, the user specific field on each content channel comprises one user field.

7. The method according to any one of claims 1 to 6, the first indication information is carried in a PPDU format field and a puncturing field;

the PPDU format field indicates a format of the PPDU, the format of the PPDU comprises a

single-user PPDU, a full-bandwidth MU-MIMO PPDU or an OFDMA PPDU;

the puncturing field occupies multiple bits, one value of which indicates that the PPDU is not punctured.

8. The method according to claim 3 or claim 4, the resource allocation information comprises one or more bit sequences, the one or more bit sequences indicates that the spectrum resources are divided into several sets of resource unit, and the set of resource unit includes one or more resource units;

wherein the set of resource unit is allocated to one or more stations.

9. The method according to claim 8, the bit sequences occupies 9 bits.

10. The method according to claim 8, one of the one or more bit sequences corresponds to a first set of resource unit, the first set of resource unit is allocated to one or more stations.

11. The method according to claim 8, wherein

the bit sequence is used to indicate a size and a location of the several sets of resource unit; or

the bit sequence is used to indicate a size and a location of the several sets of resource unit, and a quantity of STAs; or

the bit sequence is used to indicate a size and a location of the several sets of resource unit, and a quantity of user information fields corresponding to the several sets of resource unit.

12. The method according to claim 8, wherein the resource allocation information is further used to indicate a final resource unit of the set of resource unit allocated to a previous STA in two adjacent STAs.

13. The method according to any one of claims 1 to 11, the PPDU further comprises second indication information, and the second indication information is used to indicate a quantity of STAs.

14. An information indication method, comprising：

receiving, by a station, STA, physical layer protocol data unit, PPDU, wherein a preamble of the PPDU comprises an U-SIG field, the U-SIG field comprises first indication information indicating a transmission mode of the PPDU, the transmission mode of the PPDU comprises any of a single-user full-bandwidth transmission, a single-user full-bandwidth punctured transmission, a full-bandwidth MU-MIMO transmission, a full-bandwidth MU-MIMO punctured transmission, and an OFDMA transmission;

determining, by the STA, the transmission mode of the PPDU, according to the first indication information.

15. The method according to claim 14, the preamble of the PPDU comprises EHT-SIG field, the EHT-SIG field comprises a common field and a user specific field, the user specific field comprises one or more user fields, the user field comprises association identifier, AID of a station.

16. The method according to claim 14, when the first indication information indicates the single-user full-bandwidth transmission, the single-user full-bandwidth punctured transmission, the full-bandwidth MU-MIMO transmission, or the full-bandwidth MU-MIMO punctured transmission, the common field comprises no resource allocation information.

17. The method according to claim 14, when the first indication information indicates the OFDMA transmission, the common field comprises resource allocation information.

18. The method according to claim 14, when the first indication information indicates the single-user full-bandwidth punctured transmission or the single-user full-bandwidth punctured transmission, the user specific field comprises one user field.

19. The method according to any one of claims 15 to 18, the U-SIG field comprises a bandwidth field, when a bandwidth of the PPDU indicated by the bandwidth field is greater than 20MHz, the user specific field on each content channel comprises one user field.

20. The method according to any one of claims 14 to 19, the first indication information is carried in a PPDU format field and a puncturing field;

the PPDU format field indicates a format of the PPDU, the format of the PPDU comprises a single-user PPDU, a full-bandwidth MU-MIMO PPDU or an OFDMA PPDU;

the puncturing field occupies multiple bits, one value of which indicates that the PPDU is not punctured.

21. The method according to claim 16 or claim 17, the resource allocation information comprises one or more bit sequences, the one or more bit sequences indicates that the spectrum resources are divided into several sets of resource unit, and the set of resource unit includes one or more resource units;

wherein the set of resource unit is allocated to one or more stations.

22. The method according to claim 21, the bit sequences occupies 9 bits.

23. The method according to claim 21, one of the one or more bit sequences corresponds to

a first set of resource unit, the first set of resource unit is allocated to one or more stations.

24. The method according to claim 21, wherein

the bit sequence is used to indicate a size and a location of the several sets of resource unit; or

the bit sequence is used to indicate a size and a location of the several sets of resource unit, and a quantity of STAs; or

the bit sequence is used to indicate a size and a location of the several sets of resource unit, and a quantity of user information fields corresponding to the several sets of resource unit.

25. The method according to claim 21, wherein the resource allocation information is further used to indicate a final resource unit of the set of resource unit allocated to a previous STA in two adjacent STAs.

26. The method according to any one of claims 14 to 25, the PPDU further comprises second indication information, and the second indication information is used to indicate a quantity of STAs.

27. A communications apparatus, comprising a module configured to perform the method according to any one of claims 1 to 26.

28. A computer-readable storage medium,

configured to store a computer program, wherein the computer program comprises instructions for performing the method according to any one of claims 1 to 26.

29. A computer program, wherein the computer program comprises instructions for performing the method according to any one of claims 1 to 26.