CLAIMS

What is claimed is:

1. A multi-link group addressed traffic transmission method, wherein the method comprises:

generating, by a first access point (AP) of an access point multi-link device (AP MLD), group addressed traffic indication information, wherein the AP MLD has been established a multi-link association with a station multi-link device (STA MLD), the group addressed traffic indication information indicates whether one or more APs of the AP MLD have a group addressed traffic,wherein the one or more APs of the AP MLD comprise an AP of the AP MLD other than the first AP; and

sending, by the first AP, the group addressed traffic indication information.

2. The method according to claim 1, wherein

the group addressed traffic indication information indicates whether each AP of the AP MLD has a group addressed traffic.

3. The method according to claim 1 or 2, wherein

a value of the bit of the group addressed traffic indication information indicates whether the AP corresponding to the bit has a group addressed traffic.

4. The method according to any one of claims 1 to 3, wherein

the group addressed traffic indication information is a part of bits in a partial virtual bitmap field in a traffic indication map (TIM) element, wherein the part of bits in the partial virtual bitmap field in the TIM element indicate whether each AP of the AP MLD other than the first AP has a group addressed traffic.

5. The method according to claim 4, wherein

the part of bits in the partial virtual bitmap field in the traffic indication map (TIM) element are consecutive bits.

6. The method according to any one of claims 1 to 5, wherein

an association identifier (AID) corresponding to each bit of the group addressed traffic indication information is different from an AID of a station managed by each AP of the AP MLD; or

an AID corresponding to each bit of the group addressed traffic indication information is different from an AID of the STA MLD associated with the AP MLD, and multiple stations (STAs) of the STA MLD share one AID.

7. The method according to any one of claims 1 to 3, wherein the group addressed traffic indication information comprises bit 0 of a bitmap control field in a TIM element, and the bit 0 isused to indicate whether the first AP has a group addressed traffic.

8. The method according to claim 1 or 2, wherein in the group addressed traffic indication information, a quantity of bits corresponding to the AP MLD is a fixed quantity of bits.

9. The method according to claim 4, wherein for the part of bits in the partial virtual bitmap field, one or more bits corresponding to the AP MLD, other than the bits corresponding to the AP of the AP MLD, are set to zero by default; and; the bits corresponding to the AP of the AP MLD do not include the bit corresponding to the first AP.

10. The method according to claim 4, wherein in the partial virtual bitmap fields, one or more bits corresponding to each AP except the first AP in the AP MLD, in ascending order according to the link identifiers of the APs.

11. The method according to claim 4 or 5, wherein in the group addressed traffic indication information, in the partial virtual bitmap field in the TIM element, AIDs corresponding to bits corresponding to the AP MLD, are successively allocated in ascending order or descending order of link identifiers of all APs except the first AP of the AP MLD.

12. The method according to claim 1, wherein the group addressed traffic indication information is carried in a transmit service indication bitmap (DTIM) beacon frame.

13. The method according to according to any one of claims 1 to 12, wherein the group

addressed traffic includes a group addressed management frame, and the group addressed traffic indication information is group addressed management frame indication field.

14. A multi-link group addressed traffic transmission method, wherein the method comprises:receiving, by a first station (STA) of a station multi-link device (STA MLD), group addressed traffic indication information from a first access point (AP) of an access point multi-link device (AP MLD), wherein the AP MLD has been established a multi-link association with the STA MLD, the group addressed traffic indication information indicates whether one or more APs of the AP MLD have a group addressed traffic, wherein the one or more APs of the AP MLD comprise an AP of the AP MLD other than the first AP; determining, by the first STA, based on the group addressed traffic indication information, whether the one or more APs have a group addressed traffic.

15. The method according to claim 14, whereinthe receiving, by a first STA of a STA MLD, group addressed traffic indication information from an AP MLD comprises:listening to, by the first STA of the STA MLD, group addressed traffic indication information from one AP of the AP MLD.

16. The method according to claim 14 or 15, wherein the group addressed traffic indication information is carried in a delivery traffic indication map (DTIM) beacon frame.

17. The method according to claim 16, wherein the method further comprises:receiving, by the first STA, a group addressed traffic after the DTIM beacon frame.

18. The method according to any one of claims 14 to 16, wherein the group addressed traffic indication information comprises a part of bits in a partial virtual bitmap field in a traffic indication map (TIM) element, wherein the part of bits in the partial virtual bitmap field in the TIM element indicate whether each AP of the AP MLD other than the first AP has a group addressed traffic.

19. The method according to claim 18, wherein

the part of bits in the partial virtual bitmap field in the traffic indication map (TIM) element are consecutive bits.

20. The method according to any one of claims 14 to 16, wherein the group addressed traffic indication information comprises bit 0 of a bitmap control field in a TIM element, and the bit 0 is used to indicate whether the first AP has a group addressed traffic.

21. The method according to claim 14 or 15, wherein for the part of bits in the partial virtual bitmap field in the group addressed traffic indication information, a quantity of bits corresponding to the AP MLD is a fixed quantity of bits.

22. The method according to claim 18, wherein for the part of bits in the partial virtual bitmap field, one or more bits corresponding to the AP MLD, other than the bits corresponding to the AP of the AP MLD, are set to zero by default; and; the bits corresponding to the AP of the AP MLD do not include the bit corresponding to the first AP.

23. The method according to claim 18, wherein in the partial virtual bitmap fields, one or more bits corresponding to each AP except the first AP in the AP MLD, in ascending order according to the link identifiers of the APs.

24. The method according to claim 18 or 19, wherein in the group addressed traffic indication information, in the partial virtual bitmap field in the TIM element, AIDs corresponding to bits corresponding to the AP MLD, are successively allocated in ascending order or descending order of link identifiers of all APs except the first AP of the AP MLD.

25. The method according to any one of claims 14 to 24, wherein the group addressed traffic includes a group addressed management frame, and the group addressed traffic indication information is group addressed management frame indication field.

26. An access point in an access point multilink device, comprising at least one processor and an interface, wherein the processor and the interface are configured to implement the group addressed service transmission method applicable to multiple links according to any one of claims 1 to 13.

27. A station in a station multilink device, comprising at least one processor and an interface, wherein the processor and the interface are configured to implement the group addressed service transmission method applicable to multiple links according to any one of claims 14 to 24.

28. A chip system, comprising at least one processor and an interface, wherein the processor and the interface are configured to support any access point in an access point multilink device in implementing the group addressed traffic transmission method applicable to multiple links according to any one of claims 1 to 13; or

the processor and the interface are configured to support any station in a station multilink device in implementing the group addressed traffic transmission method applicable to multiple links according to any one of claims 14 to 24.

29. A computer-readable storage medium, configured to store a computer program, wherein when the computer program runs on a computer, the computer is enabled to perform the method according to any one of claims 1 to 13, or perform the method according to any one of claims 14 to 24.

30. An access point multi-link device, wherein the access point multilink device comprises multiple access points, and at least one access point is a first access point (AP) according to claim 26.

31. A station multi-link device, wherein the station multilink device comprises multiple stations, and at least one station is a station according to claim 27.

32. A system, comprising at least one access point in an access point multilink device and at least one station in a station multilink device, wherein the access point is configured to implement the group addressed traffic transmission method applicable to multiple links according to any one of claims 1 to 13, and the station is configured to implement the group addressed traffic transmission method applicable to multiple links according to any one of claims 14 to 24.