CLAIMS

1. An access point multi-link device (AP MLD), discovery method, comprising:

generating, by a reporting AP, a management frame, wherein the management frame comprises a first information field, wherein the first information field indicating whether a reported AP is affiliated to a same AP MLD as the reporting AP; and

sending, by the reporting AP, the management frame to a station.

2. An AP MLD discovery method, comprising:

receiving, by a station, a management frame from a reporting AP, wherein the management frame comprises a first information field, wherein the first information field indicating whether a reported AP is affiliated to a same AP MLD as the reporting AP; and

determing, by the station, whether the reported AP is affiliated to the same AP MLD as the reporting AP according to the first information field.

3. The method according to claim 1 or 2, wherein the reported AP is affiliated to the same AP MLD as the reporting AP, or the reported AP belongs to a same multiple basic service set identifier (BSSID) set as a member of the AP MLD to which the reporting AP is affiliated.

4. The method according to any one of claims 1 to 3, wherein the first information field further indicates an MLD identifier of the AP MLD to which the reported AP is affiliated.

5. The method according to any one of claims 1 to 4, wherein the first information field is set to 0 to indicate the reported AP is affiliated to the same AP MLD as the reporting AP.

6. The method according to any one of claims 1 to 5, wherein the first information field is set to 255 to indicate the reported AP is not affiliated to any AP MLD.

7. The method according to any one of claims 1 to 6, wherein the management frame further comprises a link identifier of the reported AP.

8. The method according to claim 7, wherein the link identifier corresponds to an operating class, a channel number, or a MAC address of the reported AP.

9. The method according to claim 7 or 8, wherein the link identifier of the reported AP is unique in an AP MLD to which the reproted AP is affiliated.

10. The method according to any one of claims 1 to 9, wherein the management frame further comprises a link identifier of the reporting AP.

11. The method according to claim 10, wherein the the link indentifier of the reporting AP is

carried in an MLD common information field of an MLD element.

12. The method according to any one of claims 1 to 11, wherein the management frame further comprises an MLD element, wherein the MLD element carries an MLD MAC address present field or a link ID present field.

13. The method according to any one of claims 1 to 12, wherein the first information field is carried in a reduced neighbor report element.

14. The method according to any one of claims 1 to 13, wherein the management frame is a beacon frame or a probe response frame.

15. An access point multi-link device (AP MLD) discovery method, comprising:

sending, by a station, a probe request frame, wherein the probe request frame comprises at least one link idetifiers for requesting information of at least one AP, and the station is affiliated to a station (STA) MLD; and

receiving, by the station from an AP MLD, a probe response frame, wherein the probe response frame carries the information of at least one AP requested by the station.

16. An access point multi-link device (AP MLD) discovery method, comprising:

receiving, by an AP MLD from a STA MLD, a probe request frame, wherein the probe request frame comprises at least one link idetifiers for requesting information of at least one AP; and

sending, by the AP MLD to the STA MLD, a probe response frame, wherein the probe response frame carries the information of at least one AP requested by the STA MLD.

17. The method according to claim 15 or 16, wherein the probe request frame comprises an MLD element, and an MLD common information field of the MLD element comprises an MLD identifier.

18. The method according to any one of claims 15 to 17, wherein the MLD element further comprises at least one link identifier of an AP.

19. The method according to any one of claims 15 to 18, wherein the at least one AP comprises all APs in an AP MLD to which a reporting AP is affiliated, or all APs in an AP MLD to which a nontransmitted AP in a same multiple BSSID set as the reporting AP is affiliated, or at least one AP in an AP MLD in a same multiple BSSID set as one AP in an AP MLD to which the reporting AP is affiliated.

20. An access point multi-link device (AP MLD) discovery method, comprising:

generating, by a reporting AP, a management frame carrying information of a reported AP, wherein the reported AP is affiliated to an AP MLD, and the information of the reported AP comprises information of the AP MLD; and

sending, by the reporting AP, the management frame.

21. An access point multi-link device (AP MLD) discovery method, comprising:

receiving, by a station from a reporting AP, a management frame carrying information of a reported AP, wherein the reported AP is affiliated to an AP MLD, and the information of the reported AP comprises information of the AP MLD; and

parsing, by the station, the management frame.

22. The method according to claim 20 or 21, wherein the management comprises neighbor report element, and the information of the reported AP is carried in the neighbor report element.

23. The method according to any one of claims 20 to 22, wherein the information of the AP MLD comprises: an MLD MAC Address of the AP MLD, a link identifier of the reported AP, or information of an AP belongs to the AP MLD.

24. An apparatus, comprising a memory storing program instructions, and a processor coupled to the memory, wherein the program instructions, when executed by the processor, enable the apparatus to perform the method according to any one of claims 1 to 23.

25. A computer program product, wherein when the computer program product runs on a computer, the computer is enabled to perform the method according to any one of claims 1 to 23.

26. A communication system, comprising the apparatus according to claim 24.