CLAIMS

What is claimed is:

1. A communication method applied to a multi-link device in a wireless local area network (WLAN), comprising:

receiving, by a station, a probe request frame, wherein the station belongs to a multi-link device;

determining, by the station according to a preset condition, whether to respond to the probe request frame, wherein the preset condition comprises at least:

a reference identifier in the probe request frame does not match a reference identifier of each station in the multi-link device; and

if the preset condition is satisfied, skipping sending a probe response frame in response to the probe request frame.

2. The method according to claim 1, wherein~~A communication method applied to a multi-link device in a wireless local area network WLAN, comprising:~~

~~receiving, by a station, a probe request frame, wherein the station belongs to a multi-link device, and~~ the station in the multi-link device belongs to a multiple basic service set identifier (BSSID) set; and

~~determining, by the station according to a preset condition, whether to respond to the probe request frame, wherein~~ wherein the preset condition further comprises ~~at least~~:

~~a reference identifier in the probe request frame does not match a reference identifier of each station in the multi-link device, and~~ the reference identifier in the probe request frame does not match a reference identifier of each station in a multiple BSSID set to which each station in the multi-link device belongs~~; and~~

~~if the preset condition is satisfied, skipping sending a probe response frame in response to the probe request frame~~.

3. The method according to claim 1 or 2, wherein the probe request frame comprises a receiver address;

the reference identifier in the probe request frame is a receiver medium access control (MAC) address carried in the receiver address; and

the reference identifier of the station is a MAC address of the station.

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

the reference identifier in the probe request frame is a service set identifier (SSID) field in the probe request frame, or an SSID comprised in an SSID list element in the probe request frame, or an SSID corresponding to a short SSID comprised in a short SSID list element in the probe request frame; and

the reference identifier of the station is an SSID of the station.

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

the reference identifier in the probe request frame is carried in a ~~basic service set identifier~~ BSSID field in the probe request frame; and

the reference identifier of the station is a BSSID of the station.

6. The method according to ~~any one of claims 1 to 5~~claim 1, wherein one or more stations in the multi-link device belong to a multiple BSSID set.

7. The method according to claim 6, wherein the one or more stations are transmitted BSSID stations in the multiple BSSID set.

8. The method according to claim 6, wherein the one or more stations comprise nontransmitted BSSID stations in the multiple BSSID set.

9. A communication apparatus applied to a multi-link device in a wireless local area network (WLAN), wherein ~~the apparatus is used in a multi-link device, and~~ the apparatus comprises:

a transceiver unit, configured to receive a probe request frame; and

a processing unit, configured to determine, according to a preset condition, whether to respond to the probe request frame, wherein the preset condition comprises at least:

a reference identifier in the probe request frame does not match a reference identifier of each station in the multi-link device; and

the processing unit is further configured to: if the preset condition is satisfied, skip sending a probe response frame in response to the probe request frame.

10. ~~A~~ The communication apparatus according to claim 9, ~~in a wireless local area network WLAN, wherein the apparatus is used in a multi-link device, and the apparatus comprises:~~

~~a transceiver unit, configured to receive a probe request frame,~~ wherein ~~a station~~the apparatus in the multi-link device belongs to a multiple BSSID set; and

~~a processing unit, configured to determine, according to a preset condition, whether to respond to the probe request frame,~~ wherein the preset condition further comprises ~~at least~~:

~~a reference identifier in the probe request frame does not match a reference identifier of each station in the multi-link device, and~~ the reference identifier in the probe request frame does not match a reference identifier of each station in a multiple BSSID set to which each station in the multi-link device belongs~~; and~~

~~the processing unit is further configured to: if the preset condition is satisfied, skip sending a probe response frame in response to the probe request frame~~.

11. The communication apparatus according to claim 9 or 10, wherein the probe request frame comprises a receiver address;

the reference identifier in the probe request frame is a receiver medium access control (MAC) address carried in the receiver address; and

the reference identifier of the station is a MAC address of the station.

12. The communication apparatus according to claim 9 or 10, wherein

the reference identifier in the probe request frame is a service set identifier (SSID) field in the probe request frame, or an SSID comprised in an SSID list element in the probe request frame, or an SSID corresponding to a short SSID comprised in a short SSID list element in the probe request frame; and

the reference identifier of the station is an SSID of the station.

13. The communication apparatus according to claim 9 or 10, wherein

the reference identifier in the probe request frame is carried in a ~~basic service set identifier~~ BSSID field in the probe request frame; and

the reference identifier of the station is a BSSID of the station.

14. The communication apparatus according to ~~any one of claims 8 to 13~~claim 9, wherein one or more stations in the multi-link device belong to a multiple BSSID set.

15. The apparatus according to claim 14, wherein the one or more stations are transmitted BSSID stations in the multiple BSSID set.

16. The apparatus according to claim 14, wherein the one or more stations comprise one or more nontransmitted BSSID stations in the multiple BSSID set.

17. A communication method applied to a multi-link device in a WLAN. The method includes:

generating, by a reporting access point (AP), multi-link device (MLD) information, wherein the reporting AP belongs to an AP multi-link device, and the AP multi-link device comprises the reporting AP and a reported AP, wherein the MLD information comprises information about the

reporting AP and information about the reported AP, wherein the information about the reporting AP indicates the reporting AP, and the information about the reported AP indicates the reported AP; and

sending, by the reporting AP, the MLD to a station.

18. A communication method applied to a multi-link device in a WLAN. The method includes:

receiving, by a station from a reporting access point (AP), multi-link device (MLD) information, wherein the reporting AP belongs to an AP multi-link device, and the AP multi-link device comprises the reporting AP and a reported AP, wherein the MLD information comprises information about the reporting AP and information about the reported AP, wherein the information about the reporting AP indicates the reporting AP, and the information about the reported AP indicates the reported AP; and

parsing, by the station, the MLD information to obtain the information about the reporting AP and the information about the reported AP.

19. A communication apparatus applied to a reporting access point (AP) in a multi-link device in a WLAN, comprising:

a processing unit, configured to generate multi-link device (MLD) information; and

a transceiver unit, configured to send the MLD information to a station, wherein the reporting AP belongs to an AP multi-link device, and the AP multi-link device comprises the reporting AP and a reported AP, wherein the MLD information comprises information about the reporting AP and information about the reported AP, wherein the information about the reporting AP indicates the reporting AP, and the information about the reported AP indicates the reported AP.

20. A communication apparatus applied to a station in a multi-link device in a WLAN, comprising:

a transceiver unit, configured to receive multi-link device (MLD) information from a reporting access point (AP), wherein the reporting AP belongs to one AP multi-link device, and the AP multi-link device comprises the reporting AP and a reported AP; wherein the MLD information comprises information about the reporting AP and information about the reported AP, wherein the information about the reporting AP indicates the reporting AP, and the information about the reported AP indicates the reported AP; and

a processing unit, configured to parse the MLD information to obtain the information about the reporting AP and the information about the reported AP.

~~17~~21. A communication apparatus, wherein the communication apparatus comprises a processor, a transceiver, and a memory, wherein

the transceiver is configured to receive and send information, or communicate with another network element;

the memory is configured to store a computer program; and

the processor is configured to execute the computer program, to enable the communication apparatus implement the method according to any one of claims 1 to 8, 17 and 18.

~~18~~22. A ~~communication apparatus~~chip, wherein the chip comprises a processor and a memory, the memory is configured to be coupled to the processor, and store a computer program and data that are required when the processor runs, and the processor is configured to execute the computer program stored in the memory, to cause a communication apparatus comprising the chip to implement the method according to any one of claims 1 to 8, 17 and 18.

~~19. A chip, wherein the chip comprises a processor and an interface circuit, and the processor is configured to communicate with another apparatus through the interface circuit, so that the apparatus performs the method according to any one of claims 1 to 8.~~

~~20~~23. A computer-readable storage medium, wherein the computer-readable storage medium stores a computer program, and when the computer program runs on a processor, a communication apparatus comprising the processor is caused to perform the method ~~according to~~in any one of claims 1 to 8, 17 and 18 ~~is implemented~~.

~~21. A computer program product, wherein the computer program product comprises a computer program for execution by a processor, and when the computer program runs on the processor, the method according to any one of claims 1 to 8 is implemented.~~

~~22. A communication system, wherein the communication system comprises the apparatus according to claim 9 and any one of claims 11 to 16, and the apparatus according to any one of claims 10 to 16.~~