

CLAIMS

What is claimed is:

1. A communication method, comprising:

generating, by a first access point AP, a management frame, wherein the management frame
5 comprises a specific element of the first AP and a multiple BSSID element, the specific element is
a channel switch related element or a quiet channel related element, and the first AP is an AP
corresponding to a transmitted BSSID in a first multiple basic service set identifier BSSID set, and
the multiple BSSID element does not comprise the specific element of the AP corresponding to
the nontransmitted BSSID; and

10 sending, by the first AP, the management frame.

2. A communication method, comprising:

receiving, by a station STA, a management frame, wherein the management frame comprises
a specific element of a first access point AP and a multiple BSSID element, the specific element is
a channel switch related element or a quiet channel related element, and the first AP is an AP
15 corresponding to a transmitted BSSID in a first multiple basic service set identifier BSSID set, and
the multiple BSSID element does not comprise the specific element of the AP corresponding to
the nontransmitted BSSID; and

determining, by the STA based on the management frame, the value of the specific element
of the AP corresponding to the nontransmitted BSSID in the first multiple BSSID set or the value
20 of the specific element of the first AP.

3. The method according to claim 1 or 2, wherein a value of a specific element of an AP
corresponding to a nontransmitted BSSID in the multiple BSSID set is the same as a value of the
specific element of the first AP.

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

25 the management frame is a beacon frame or a probe response frame.

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

the specific element comprises at least one of the following:

a channel switch announcement element, an extended channel switch announcement element,
a quiet element, a quiet channel element, and a max channel switch time element.

30 6. The method according to any one of claims 1 to 4, wherein the management frame further

comprises a specific element of a second AP; wherein

the first AP and the second AP are affiliated with a same AP multi-link device (MLD); or,

the second AP and the third AP are affiliated with a same AP MLD, and the third AP is an AP corresponding to a nontransmitted BSSID in the first multiple BSSID set to which the first AP belongs.

7. The method according to claim 6, wherein the second AP is an AP in a second multiple BSSID set, and a value of a specific element of the second AP is the same as a value of a specific element of another AP in the second multiple BSSID set other than the second AP.

8. The method according to claim 6 or 7, wherein when the second AP and the third AP are affiliated with a same AP MLD, and the third AP is an AP corresponding to a nontransmitted BSSID in the first multiple BSSID set to which the first AP belongs, the specific element of the second AP is located in the multiple BSSID element of the management frame.

9. The method according to claim 8, wherein,

the multiple BSSID element comprises at least one nontransmitted BSSID profile, and the specific element of the second AP is located in one nontransmitted BSSID profile in the at least one nontransmitted BSSID profile.

10. The method according to claim 9, wherein one nontransmitted BSSID profile in the at least one nontransmitted BSSID profile is a nontransmitted BSSID profile corresponding to the third AP; and the specific element of the second AP is located in a per-STA profile field of a multi-link element in the nontransmitted BSSID profile corresponding to the third AP.

11. The method according to claim 6 or 7, wherein,

when the first AP and the second AP are affiliated with a same AP MLD, the specific element of the second AP is located in a multi-link element of the management frame.

12. The method according to claim 11, wherein,

the specific element of the second AP is located in per-STA profile field corresponding to the second AP in the multi-link element.

13. The method according to claim 12, wherein the per-STA profile field corresponding to the second AP comprises a link identifier field, and the link identifier field is a link identifier of the second AP.

14. A communication method, comprising:

generating, by a first access point AP, a first management frame, wherein the first

management frame comprises a specific element of a second AP, the specific element is a channel switch related element or a quiet channel related element; and wherein:

the first AP and the second AP are affiliated with a same AP multi-link device (MLD); or,

the first AP is an AP corresponding to a transmitted basic service set identifier (BSSID) in a first multiple BSSID set, a third AP is an AP corresponding to a nontransmitted BSSID in the first multiple BSSID set, and the second AP and the third AP are affiliated with a same AP MLD; and sending, by the first AP, the first management frame.

15. A communication method, comprising:

receiving, by a station STA, a first management frame from a first access point AP, wherein the first management frame comprises a specific element of a second AP, the specific element is a channel switch related element or a quiet channel related element; and wherein:

the first AP and the second AP are affiliated with a same AP multi-link device (MLD); or,

the first AP is an AP corresponding to a transmitted basic service set identifier (BSSID) in a first multiple BSSID set, a third AP is an AP corresponding to a nontransmitted BSSID in the first multiple BSSID set, and the second AP and the third AP are affiliated with a same AP MLD; and

determining, by the STA based on the first management frame, the value of the specific element of the second AP or the value of the specific element of the another AP other than the second AP in the second multiple BSSID set.

16. The method according to claim 14 or 15, wherein when the first AP is an AP corresponding to a transmitted BSSID in the first multiple BSSID set, the third AP is an AP corresponding to a nontransmitted BSSID in the first multiple BSSID set, and the second AP and the third AP are affiliated with a same AP MLD, the specific element is located in a multiple BSSID element of the first management frame.

17. The method according to claim 16, wherein

the multiple BSSID element comprises at least one nontransmitted BSSID profile, and the specific element is located in one nontransmitted BSSID profile in the at least one nontransmitted BSSID profile.

18. The method according to claim 17, wherein

a nontransmitted BSSID profile in the at least one nontransmitted BSSID profile other than the one nontransmitted BSSID profile does not comprise the specific element.

19. The method according to claim 16 or 17, wherein

the one nontransmitted BSSID profile is a nontransmitted BSSID profile corresponding to the third AP in the at least one nontransmitted BSSID profile.

20. The method according to claim 14 or 15, wherein when the first AP and the second AP are affiliated with a same AP MLD, the specific element is located in a per-STA profile field
5 corresponding to the second AP in a multi-link element of the first management frame.

21. The method according to claim 20, wherein
the per-STA profile field corresponding to the second AP comprises a link identifier field, and
the link identifier field is a link identifier of the second AP.

22. The method according to any one of claims 14 to 21, wherein the second AP is an AP that
10 is performing a channel switching operation or a channel quiet operation corresponding to the specific element.

23. The method according to any one of claims 14 to 22, wherein the second AP is an AP
corresponding to a transmitted BSSID, and the specific element of the second AP comprised in the
first management frame corresponds to a specific element of the second AP comprised in a second
15 management frame sent by the second AP prior to sending, by the first AP, the first management
frame.

24. The method according to any one of claims 14 to 22, wherein the second AP is an AP
corresponding to a nontransmitted BSSID in a second multiple BSSID set, and a specific element
of the second AP is indicated by a third management frame sent by an AP corresponding to a
20 transmitted BSSID in a same set of multiple BSSIDs as the second AP, wherein a value of the
specific element of the second AP is the same as a value of the specific element of the AP
corresponding to the transmitted BSSID in the same multiple BSSID set as the second AP; and
wherein the specific element of the second AP comprised in the first management frame
corresponds to the specific element of the second AP indicated in the third management frame.

25. The method according to any one of claims 14 to 24, wherein the second AP switches from
a first operating class and a first channel to a second operating class and a second channel at a
target time, and the first management frame comprises a reduced neighbor report (RNR) element,
and the method further comprises:

when the first management frame is sent before the target time, the RNR element comprises
30 the first operating class and the first channel; or

when the first management frame is sent after the target time, the RNR element comprises

the second operating class and the second channel.

26. The method according to any one of claims 14 to 25, wherein a time field of the specific element of the second AP is in reference to beacon transmission time and Beacon Interval of the second AP.

5 27. The method according to any one of claims 14 to 26, wherein the first management frame is a beacon frame or a probe response frame.

28. The method according to any one of claims 14 to 27, wherein the specific element comprises at least one of the following:

10 a channel switch announcement element, an extended channel switch announcement element, a quiet element, a quiet channel element, and a max channel switch time element.

29. A communication apparatus, wherein the apparatus comprises a transceiver unit and a processing unit, and the apparatus is configured to perform the method according to any one of claims 1 to 28.

15 30. A communication apparatus, comprising at least one processor coupled to a memory, wherein

the memory is configured to store a program or instructions; and

the at least one processor is configured to execute the program or the instructions, so that the apparatus implements the method according to any one of claims 1 to 28.

20 31. A computer program product comprising program instructions, wherein when the program instructions are run on a computer, the computer is enabled to perform the method according to any one of claims 1 to 28.

32. A computer-readable storage medium, wherein the computer-readable storage medium stores program instructions, and when the program instructions are run, the method according to any one of claims 1 to 28 is performed.