

CLAIMS

What is claimed is:

1. A multi-link communication method, comprising:

generating, by an access point multi-link device (AP MLD), a first frame, wherein the first
5 frame comprises a supported rates and basic service set (BSS) membership selectors element, the
supported rates and BSS membership selectors element comprises first indication information, and
the first indication information indicates that a non-access point multi-link device (non-AP MLD)
is disallowed to initiate multi-link setup with the AP MLD on a first link; and

sending, by the AP MLD, the first frame on the first link.

10 2. The method according to claim 1, wherein the AP MLD has at least two links, and the at
least two links comprise the first link and a second link; and

the method further comprises:

sending, by the AP MLD, a beacon frame or a probe response frame on the second link,
wherein the beacon frame or the probe response frame comprises a reduced neighbor report (RNR)
15 element, the RNR element comprises a neighbor AP information field corresponding to a first
access point, a channel number field in the neighbor AP information field is set to 0, and the first
access point is an access point operating on the first link in the AP MLD.

3. The method according to claim 1 or 2, wherein the first indication information is that a
20 BSS membership selector in the supported rates and BSS membership selectors element is set to
a preset value.

4. The method according to any one of claims 1 to 3, wherein the first frame is any one of the
following: a beacon frame, a probe response frame, an association response frame, or a
reassociation response frame.

25 5. The method according to any one of claims 1 to 4, wherein when the first frame is the
association response frame or the reassociation response frame, the first frame further comprises
a quality of service (QoS) map element, wherein the QoS map element comprises respective
differentiated services code point (DSCP) range fields corresponding to eight different user
priorities; DSCP ranges indicated by DSCP range fields corresponding to m user priorities in the
30 eight different user priorities cover DSCP space, wherein the DSCP space is an interval [0, 63],
and m is a positive integer less than 8; and

DSCP low value fields and DSCP high value fields in DSCP range fields corresponding to
remaining (8-m) user priorities in the eight different user priorities are all set to 255.

6. The method according to claim 1 or 2, wherein after the sending, by the AP MLD, the first

frame on the first link, the method further comprises:

receiving, by the AP MLD, a stream classification service (SCS) request frame, wherein the SCS request frame comprises an SCS identifier field, and the SCS identifier field indicates a reported SCS stream; and

5 sending, by the AP MLD, an SCS response frame, wherein the SCS response frame comprises a status code field, and the status code field indicates whether the AP MLD accepts the SCS stream.

7. The method according to claim 6, wherein when the status code field indicates that the AP MLD accepts the SCS stream, the SCS response frame further comprises a TID-to-link mapping element, wherein the TID-to-link mapping element indicates a TID mapping rule.

10 8. The method according to claim 5 or 6, wherein the method further comprises:

sending, by the AP MLD, a data packet, wherein a TID of the data packet is set based on the QoS map element when the data packet does not match the SCS stream, or a TID of the data packet is set based on a TID-to-link mapping element carried in the SCS response frame when the data packet matches the SCS stream.

15 9. The method according to claim 6, wherein the method further comprises:

sending, by the non-AP MLD, a data packet, wherein a TID of the data packet is set based on a QoS map element when the data packet does not match the SCS stream, or a TID of the data packet is set based on a TID-to-link mapping element carried in the SCS response frame when the data packet matches the SCS stream.

20 10. A multi-link communication method, comprising:

sending, by an AP MLD, a beacon frame on a first link, wherein the beacon frame comprises a supported rates and BSS membership selectors element, the supported rates and BSS membership selectors element comprises first indication information, and the first indication information indicates that a first non-AP MLD is disallowed to initiate multi-link setup with the
25 AP MLD on the first link; and

sending, by the AP MLD, a BSS transition management request frame on the first link, wherein the BSS transition management request frame comprises second indication information, the second indication information indicates a second non-AP MLD associated with the AP MLD to ignore the BSS transition management request frame, and the BSS transition management
30 request frame is used to request a first station associated with a first access point to perform BSS transition, wherein the first access point is an access point operating on the first link in the AP MLD, and the first station supports only a protocol earlier than an extremely high throughput protocol.

11. The method according to claim 10, wherein the first indication information further
35 indicates that a single-link station supporting the extremely high throughput protocol is disallowed

to set up association with the AP MLD on the first link.

12. The method according to claim 10 or 11, wherein the first indication information is that a BSS membership selector in the supported rates and BSS membership selectors element is set to a preset value.

5 13. A communication apparatus, comprising a processor and a transceiver, wherein the transceiver is configured to send/receive a frame; and when the processor runs program instructions, the communication apparatus is enabled to perform the method according to any one of claims 1 to 12.

10 14. A computer-readable storage medium, wherein the computer-readable storage medium stores program instructions; and 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 12.

15 15. 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 12.