another example, the second value is any reserved value from 0 to 135, for example, any value in 4, 8, 9, 20, 21, 26, 29, 36, 48, 66, 69 to 71, 90, 91, 114, 115, or 127. It may be understood that the second value in this embodiment of this application is different from the first value in Embodiment 1.

**[00186]** As shown in Table 2, when the first status code field is set to the second value, the first status code field indicates that multi-link setup between the non-AP MLD and the AP MLD fails; or indicates that multi-link setup between the non-AP MLD and the AP MLD fails, and that if the association request frame is transmitted on another requested link (a link other than the first link), multi-link setup may succeed. A value of the second status code field cannot be the second value in this embodiment of this application. In other words, only the first status code field can be the second value.

**Table 2**

| Status code (first status code) | Name (name) | Meaning (meaning) |
|---|---|---|
| ... | ... | ... |
| Second value | DENIED_TRANSMITTING_LINK_NOT_ACCEPTED | Multi-link setup fails (Multi-Link Setup is failed) |
| | DENIED_OTHER_LINK_CAN_BE_ACCEPTED | Multi-link setup fails, but if an association request is transmitted on another requested link, multi-link setup may succeed (Multi-Link Setup is failed, but can be successful if the association request is transmitted on other requested links) |
| ... | ... | ... |

**[00187]** It should be understood that, when a value of the first status code field is an existing value (for example, 0 to 135), it indicates whether the first link (or a link for transmitting the first association request frame) is accepted, whether setup succeeds, or whether the first link becomes a link in multi-link communication. For details, refer to the related description in Embodiment 1.

generate the first association request frame sent in step S101 and the second association request frame sent in step S103 in FIG. 4; and/or perform another process for performing the technologies described in this specification. The transceiver 1002 may be configured to: perform step S101, step S103, and the like in FIG. 4; and/or perform another process of the technologies described in this specification.

**[00250]** In another design, the communication apparatus 1000 may be configured to perform a function of the AP MLD in Embodiment 1. The processor 1001 may be configured to: generate the first association response frame sent in step S102 and the second association response frame sent in step S104 in FIG. 4; and/or perform another process for performing the technologies described in this specification. The transceiver 1002 may be configured to: perform step S102 and step S104 in FIG. 4; and/or perform another process of the technologies described in this specification.

**[00251]** In a design, the communication apparatus 1000 may be configured to perform a function of the non-AP MLD in Embodiment 2. The processor 1001 may be configured to: generate the first association request frame sent in step S201 and the second association request frame sent in step S203 in FIG. 7; and/or perform another process for performing the technologies described in this specification. The transceiver 1002 may be configured to: perform step S201, step S203, and the like in FIG. 7; and/or perform another process of the technologies described in this specification.

**[00252]** In another design, the communication apparatus 1000 may be configured to perform a function of the AP MLD in Embodiment 2. The processor 1001 may be configured to: generate the first association response frame sent in step S202 and the second association response frame sent in step S204 in FIG. 7; and/or perform another process for performing the technologies described in this specification. The transceiver 1002 may be configured to: perform step S202 and step S204 in FIG. 7; and/or perform another process of the technologies described in this specification.

**[00253]** In a design, the communication apparatus 1000 may be configured to perform a function of the non-AP MLD in Embodiment 3. The processor 1001 may be configured to: generate the first association request frame sent in step S301 and the second association request frame sent in step S303 in FIG. 8; and/or perform another process for performing the technologies

## CLAIMS

What is claimed is:

1. A multi-link communication setup method, comprising:

sending, by a first station of a non-access point multi-link device, non-AP MLD, a first association request frame on a first link, wherein the first association request frame comprises a multi-link element, the multi-link element comprises indication information, and the indication information indicates a second link; and

receiving, by the first station of the non-AP MLD, a first association response frame on the first link, wherein the first association response frame comprises a first status code field and a multi-link element, the multi-link element of the first association response frame comprises a second status code field; and wherein:

a value of the first status code field is not 0, to indicate that the first link is not accepted; and the second status code field is set to a first value that is not 0, to indicate that a cause why the second link is not accepted is that the first link is not accepted.

2. A multi-link communication setup method, comprising:

receiving, by a first access point of an access point multi-link device, AP MLD, a first association request frame on a first link, wherein the first association request frame comprises a multi-link element, the multi-link element comprises indication information, and the indication information indicates a second link; and

sending, by the first access point of the AP MLD, a first association response frame on the first link, wherein the first association response frame comprises a first status code field and a multi-link element, the multi-link element of the first association response frame comprises a second status code field; and wherein:

a value of the first status code field is not 0, to indicate that the first link is not accepted; and the second status code field is set to a first value that is not 0, to indicate that a cause why the second link is not accepted is that the first link is not accepted.

3. The method according to claim 1 or 2, wherein the first status code field is a status code field located outside the multi-link element of the first association response frame.

4. The method according to any one of claims 1 to 3, wherein the second status code field is a status code field comprised in a STA profile subfield of a per-STA profile subelement.

5. The method according to any one of claims 1 to 4, wherein the second status code field is set to a first value that is not 0, to indicate that a cause why the second link is not accepted is only because the first link is not accepted.

6. The method according to any one of claims 1, 3 to 5, wherein after the receiving, by the first station of the non-AP MLD, a first association response frame on the first link, the method further comprises:

sending, by a second station of the non-AP MLD, a second association request frame on the second link; and

receiving, by the second station of the non-AP MLD, a second association response frame on the second link.

7. The method according to any one of claim 2 to 5, wherein after the sending, by the first access point of the AP MLD, a first association response frame on the first link, the method further comprises:

receiving, by a second access point of the AP MLD, a second association request frame on the second link; and

sending, by the second access point of the AP MLD, a second association response frame on the second link.

8. A communication apparatus, wherein the communication apparatus comprises a processing unit and a transceiver unit, and the processing unit is configured to control the transceiver unit to:

send a first association request frame on a first link, wherein the first association request frame comprises a multi-link element, the multi-link element comprises indication information, and the indication information indicates a second link; and

receive a first association response frame on the first link, wherein the first association response frame comprises a first status code field and a multi-link element, the multi-link element of the first association response frame comprises a second status code field; and wherein:

a value of the first status code field is not 0, to indicate that the first link is not accepted; and the second status code field is set to a first value that is not 0, to indicate that a cause why the second link is not accepted is that the first link is not accepted.9. The communication apparatus according to claim 8, wherein the transceiver unit is further configured to:

send a second association request frame on the second link; and

receive a second association response frame on the second link.

10. A communication apparatus, wherein the communication apparatus comprises a processing unit and a transceiver unit, and the processing unit is configured to control the transceiver unit to:

receive a first association request frame on a first link, wherein the first association request frame comprises a multi-link element, the multi-link element comprises indication information, and the indication information indicates a second link; and

send a first association response frame on the first link, wherein the first association response frame comprises a first status code field and a multi-link element, the multi-link element of the first association response frame comprises a second status code field; and wherein:

a value of the first status code field is not 0, to indicate that the first link is not accepted; and the second status code field is set to a first value that is not 0, to indicate that a cause why the second link is not accepted is that the first link is not accepted.

11. The communication apparatus according to claim 10, wherein the transceiver unit is further configured to:

receive a second association request frame on the second link; and

send a second association response frame on the second link.

12. The communication apparatus according to any one of claims 8 to 11, wherein the first status code field is a status code field located outside the multi-link element of the first association response frame.

13. The communication apparatus according to any one of claims 8 to 12, wherein the second status code field is a status code field comprised in a STA profile subfield of a per-STA profile subelement.

14. The communication apparatus according to any one of claims 8 to 13, wherein the second status code field is set to a first value that is not 0, to indicate that a cause why the second link is not accepted is only because the first link is not accepted.

15. A communication apparatus, comprising a processor and a memory, wherein

the memory is configured to store instructions; and

the processor is configured to execute the instructions, to perform the method according to any one of claims 1 to 7.

16. A communication apparatus, comprising a logic circuit and an interface, wherein the logic circuit is coupled to the interface; and

the interface is configured to input and/or output code instructions, and the logic circuit is configured to execute the code instructions, to perform the method according to any one of claims 1 to 7.

17. A computer-readable storage medium, wherein the computer-readable storage medium is configured to store a computer program, and when the computer program is executed, the method according to any one of claims 1 to 7 is performed by a non-access point multi-link device, non-AP MLD.