CLAIMS

What is claimed is:

1. A communication apparatus, configured to be used in a station multi-link device (STA MLD), wherein the communication apparatus comprises:

a processor coupled to a memory configured to store program instructions for execution by the processor,

wherein when executing the program instructions, the communication apparatus is configured to:

send a multi-link association request frame; and

receive a multi-link association response frame;

wherein the multi-link association response frame carries link establishment status information, and the link establishment status information indicates link establishment statuses of at least two links that the STA MLD requests to establish in the multi-link association request frame, wherein the link establishment status information comprises at least two status code fields, and one of the status code fields indicates an establishment status of one of the at least two links that the STA MLD requests to establish;

wherein the at least two links comprise a transmitted link and at least one non-transmitted link, the transmitted link is a link on which the multi-link association request frame is transmitted, and the non-transmitted link is a link other than the link on which the multi-link association request frame is transmitted.

2. The communication apparatus according to claim 1, wherein a status code field of the transmitted link is carried in the multi-link association response frame.

3. The communication apparatus according to claim 1 or 2, wherein the multi-link association response frame comprises a multi-link element, and the multi-link element comprises multi-link device information and link configuration information of the at least one non-transmitted link.

4. The communication apparatus according to claim 3, wherein a status code field of the non-transmitted link is carried in the link configuration information of the non-transmitted link.

5. The communication apparatus according to claim 3 or 4, wherein the link configuration information comprises a link identifier.

6. The communication apparatus according to claim 5, wherein the link identifier indicates a value of a link, and the link configuration information indicates information related to the link.

7. A multi-link establishment method, used in a station multi-link device (STA MLD), wherein

the method comprises:

sending a multi-link association request frame; and

receiving a multi-link association response frame, wherein

the multi-link association response frame carries link establishment status information, and the link establishment status information indicates link establishment statuses of at least two links that the STA MLD requests to establish in the multi-link association request frame, wherein the link establishment status information comprises at least two status code fields, and one of the status code fields indicates an establishment status of one of the at least two links that the STA MLD requests to establish;

wherein the at least two links comprise a transmitted link and at least one non-transmitted link, the transmitted link is a link on which the multi-link association request frame is transmitted, and the non-transmitted link is a link other than the link on which the multi-link association request frame is transmitted.

8. The method according to claim 7, wherein a status code field of the transmitted link is carried in the multi-link association response frame.

9. The method according to claim 7 or 8, wherein the multi-link association response frame comprises a multi-link element, and the multi-link element comprises multi-link device information and link configuration information of the at least one non-transmitted link.

10. The method according to claim 9, wherein a status code field of the non-transmitted link is carried in the link configuration information of the non-transmitted link.

11. The method according to claim 9 or 10, wherein the link configuration information comprises a link identifier.

12. The method according to claim 11, wherein the link identifier indicates a value of a link, and the link configuration information indicates information related to the link.

13. A chip, comprising an interface and a processor, wherein the interface is coupled to the processor, wherein the chip is configured to be used in a station multi-link device (STA MLD), and the processor is configured to:

send a multi-link association request frame; and

receive a multi-link association response frame;

wherein the multi-link association response frame carries link establishment status information, and the link establishment status information indicates link establishment statuses of at least two links that the STA MLD requests to establish in the multi-link association request frame, wherein the link establishment status information comprises at least two status code fields, and one of the status code

fields indicates an establishment status of one of the at least two links that the STA MLD requests to establish;

wherein the at least two links comprise a transmitted link and at least one non-transmitted link, the transmitted link is a link on which the multi-link association request frame is transmitted, and the non-transmitted link is a link other than the link on which the multi-link association request frame is transmitted.

14. The chip according to claim 13, wherein a status code field of the transmitted link is carried in the multi-link association response frame

15. The chip according to claim 13 or 14, wherein the multi-link association response frame comprises a multi-link element, and the multi-link element comprises multi-link device information and link configuration information of the at least one non-transmitted link.

16. The chip according to claim 15, wherein a status code field of the non-transmitted link is carried in the link configuration information of the non-transmitted link.

17. The chip according to claim 15 or 16, wherein the link configuration information comprises a link identifier, wherein the link identifier indicates a value of a link, and the link configuration information indicates related information of the link.

18. A non-transitory computer-readable media storing computer instructions, that when executed by one or more processors of a station multi-link device (STA MLD), cause the one or more processors to perform the steps of:

send a multi-link association request frame; and

receive a multi-link association response frame;

wherein the multi-link association response frame carries link establishment status information, and the link establishment status information indicates link establishment statuses of at least two links that the STA MLD requests to establish in the multi-link association request frame, wherein the link establishment status information comprises at least two status code fields, and one of the status code fields indicates an establishment status of one of the at least two links that the STA MLD requests to establish;

wherein the at least two links comprise a transmitted link and at least one non-transmitted link, the transmitted link is a link on which the multi-link association request frame is transmitted, and the non-transmitted link is a link other than the link on which the multi-link association request frame is transmitted.

19. The non-transitory computer-readable media according to claim 18, wherein a status code field of the transmitted link is carried in the multi-link association response frame.

20. The non-transitory computer-readable media according to claim 18 or 19, wherein the multi-link association response frame comprises a multi-link element, and the multi-link element comprises multi-link device information and link configuration information of the at least one non-transmitted link.

21. The non-transitory computer-readable media according to claim 20, wherein a status code field of the non-transmitted link is carried in the link configuration information of the non-transmitted link.

22. The non-transitory computer-readable media according to claim 20 or 21, wherein the link configuration information comprises a link identifier, wherein the link identifier indicates a value of a link, and the link configuration information indicates related information of the link.