CLAIMS

1. A method for anchor master, AM, selection, where the method comprises:

receiving (101, 301, 401), by a device, a neighbor awareness networking beacon, NAN Beacon, frame, wherein the NAN Beacon frame carries first AM information and first time synchronization function, TSF, information, and the first AM information comprises: a first anchor master rank, AMR, a first hop count, HC, and a first anchor master beacon transmission time, AMBTT; and second AM information and second TSF information are recorded in the device, wherein the second AM information comprises: a second AMR, a second HC, and a second AMBTT;

switching (102, 303, 402), by the device, a role of the device to an AM when the NAN Beacon frame is used for AM selection, when the first AMR is less than the second AMR, and a master rank, MR, of the device is greater than the first AMR; and

updating (103, 304, 403), by the device according to the NAN Beacon frame, the second AM information and the second TSF information that are recorded in the device when the NAN Beacon frame is used for AM selection, the first AMR is less than the second AMR, and the MR of the device is less than the first AMR,

wherein the NAN Beacon frame is a synchronization Beacon frame.

2. A method for anchor master, AM, selection, where the method comprises:

receiving (101, 301, 401), by a device, a neighbor awareness networking beacon, NAN Beacon, frame, wherein the NAN Beacon frame carries first AM information and first time synchronization function, TSF, information, and the first AM information comprises: a first anchor master rank, AMR, a first hop count, HC, and a first anchor master beacon transmission time, AMBTT; and second AM information and second TSF information are recorded in the device, wherein the second AM information comprises: a second AMR, a second HC, and a second AMBTT;

switching (102, 303, 402), by the device, a role of the device to an AM when the NAN Beacon frame is used for AM selection, the first AMR is less than the second AMR, and a master rank, MR, of the device is greater than the first AMR; and

updating (103, 304, 403), by the device according to the NAN Beacon frame, the second AM information and the second TSF information that are recorded in the device when the NAN Beacon frame is used for AM selection, the first AMR is less than the second AMR, and the MR of the device is less than the first AMR,

wherein the switching or the updating is performed when the role of the device is not an AM.

3. The method according to claim 2, wherein the step of updating (103), by the device according to the NAN Beacon frame, the second AM information and the second TSF information that are recorded in the device comprises:

updating, by the device, the second AMR value to the first AMR value;

updating, by the device, the second HC value to the first HC value plus 1;

updating, by the device, the second AMBTT value to a value of a preset byte/preset bytes of the first TSF information when the NAN Beacon frame is sent by an AM; and updating, by the device, the second AMBTT value to the first AMBTT when the NAN Beacon frame is sent by a non-AM; and

updating, by the device, a value of the second TSF information to a value of the first TSF information.

4. The method according to claim 2 or 3, wherein the method further comprises:

updating (306, 307), by the device according to the NAN Beacon frame, the second TSF information and some information or all information of the second AM information that are recorded in the device when the NAN Beacon frame is used for AM selection, the first AMR is equal to the second AMR, and the first AMBTT is greater than the second AMBTT.

5. The method according to any one of claims 2 to 4, wherein the switching, by the device, the role of the device to AM comprises:

updating, by the device, the second AMR value to the MR value of the device;

updating, by the device, the second HC value to 0; and

updating, by the device, the second AMBTT value to 0x00000000.

6. The method according to any one of claims 2 to 5, wherein when the role of the device is an AM, the method further comprises:

when the MR of the device is updated, maintaining (408), by the device, the role of the device as an AM, and

updating, by the device, the recorded second AMR to an updated MR value of the device.

7. The method according to any one of claims 2 to 6, wherein the NAN Beacon frame is a synchronization Beacon frame.

8. A device (800) for anchor master, AM, selection, where the device comprises:

a memory (803) storing instructions;

a receiver (801) configured to receive a neighbor awareness networking beacon, NAN Beacon, frame, where the NAN Beacon frame carries first AM information and first time synchronization function, TSF, information, and the first AM information includes: a first anchor master rank, AMR, a first hop count, HC, and a first anchor master beacon transmission time, AMBTT; and second AM information and second TSF information are recorded in the device, wherein the second AM information comprises: a second AMR, a second HC, and a second AMBTT;

a processor (802) configured to execute the instructions to perform operations of:

switching a role of the device to an AM when the NAN Beacon frame is used for AM selection, the first AMR is less than the second AMR, and a master rank, MR, of the device is greater than the first AMR; and

updating, according to the NAN Beacon frame, the second AM information and the second TSF information that are recorded in the device when the NAN Beacon frame is used for AM selection, the first AMR is less than the second AMR, and the MR of the device is less than the first AMR,

wherein the NAN Beacon frame is a synchronization Beacon frame.

9. A device (800) for anchor master, AM, selection, where the device comprises:

a memory (803) storing instructions;

a receiver (801) configured to receive a neighbor awareness networking beacon, NAN Beacon, frame, where the NAN Beacon frame carries first AM information and first time synchronization function, TSF, information, and the first AM information includes: a first anchor master rank, AMR, a first hop count, HC, and a first anchor master beacon transmission time, AMBTT; and second AM information and second TSF information are recorded in the device, wherein the second AM information comprises: a second AMR, a second HC, and a second AMBTT;

a processor (802) configured to execute the instructions to perform operations of:

switching a role of the device to an AM when the NAN Beacon frame is used for AM selection, the first AMR is less than the second AMR, and a master rank, MR, of the device is greater than the first AMR; and

updating, according to the NAN Beacon frame, the second AM information and the second TSF information that are recorded in the device when the NAN Beacon frame is used for AM selection, the first AMR is less than the second AMR, and the MR of the device is less than the first AMR,

wherein the operation of switching or updating is performed when the role of the device is not an AM.

10. The device according to claim 9, wherein the operation of updating comprises:

updating the second AMR value to the first AMR value;

updating the second HC value to the first HC value plus 1;

updating the second AMBTT value to a value of a preset byte/preset bytes of the first TSF information when the NAN Beacon frame is sent by an AM; or updating the second AMBTT value to the first AMBTT when the NAN Beacon frame is sent by a non-AM,; and

updating a value of the second TSF information to a value of the first TSF information.

11. The device according to claim 9 or 10, wherein the processor (802) is further configured to execute the instructions to perform operations of:

updating, according to the NAN Beacon frame, the second TSF information and some information or all information of the second AM information that are recorded in the device when the NAN Beacon frame is used for AM selection, the first AMR is equal to the second AMR, and the first AMBTT is greater than the second AMBTT.

12. The device according to any one of claims 9 to 11, wherein the operation of switching comprises:

updating the second AMR value to the MR value of the device;

updating the second HC value to 0; and

updating the second AMBTT value to 0x00000000.

13. The device according to any one of claims 9 to 12, wherein when the role of the device is an AM, the processor (802) is further configured to execute the instructions to perform operations of:

when the MR of the device is updated, maintaining the role of the device as an AM, and updating the recorded second AMR to an updated MR value of the device.

14. The device according to any one of claims 9 to 13, wherein the NAN Beacon frame is a synchronization Beacon frame.

15. A computer program product, comprising computer program code, which, when executed by a computer unit, will cause the computer unit to perform a method for anchor master, AM, selection, where the method comprises:

receiving (101, 301, 401), by a device, a neighbor awareness networking beacon, NAN Beacon, frame, wherein the NAN Beacon frame carries first AM information and first time synchronization function, TSF, information, and the first AM information comprises: a first anchor master rank, AMR, a first hop count, HC, and a first anchor master beacon transmission time, AMBTT; and second AM information and second TSF information are recorded in the device, wherein the second AM information comprises: a second AMR, a second HC, and a second AMBTT;

switching (102, 303, 402), by the device, a role of the device to an AM when the NAN Beacon frame is used for AM selection, the first AMR is less than the second AMR, and a master rank, MR, of the device is greater than the first AMR; and

updating (103, 304, 403), by the device according to the NAN Beacon frame, the second AM information and the second TSF information that are recorded in the device when the NAN Beacon frame is used for AM selection, the first AMR is less than the second AMR, and the MR of the device is less than the first AMR.

16. A computer program product, comprising computer program code, which, when executed by a computer unit, will cause the computer unit to perform the method of any one of claims 1 to 7.

17. A computer readable medium for anchor master, AM, selection, comprising computer program code, which, when executed by a computer unit, will cause the computer unit to perform a method comprising: receiving (101, 301, 401), by a device, a neighbor awareness networking beacon, NAN Beacon, frame, wherein the NAN Beacon frame carries first AM information and first time synchronization function, TSF, information, and the first AM information comprises: a first anchor master rank, AMR, a first hop count, HC, and a first

anchor master beacon transmission time, AMBTT; and second AM information and second TSF information are recorded in the device, wherein the second AM information comprises: a second AMR, a second HC, and a second AMBTT;

switching (102, 303, 402), by the device, a role of the device to an AM when the NAN Beacon frame is used for AM selection, the first AMR is less than the second AMR, and a master rank, MR, of the device is greater than the first AMR; and

updating (103, 304, 403), by the device according to the NAN Beacon frame, the second AM information and the second TSF information that are recorded in the device when the NAN Beacon frame is used for AM selection, the first AMR is less than the second AMR, and the MR of the device is less than the first AMR.

18. A computer readable medium for anchor master, AM, selection, comprising computer program code, which, when executed by a computer unit, will cause the computer unit to perform the method of any one of claims 1 to 7.

19. The computer program product or the computer readable medium according to any one of claims 15 to 18, wherein the computer unit is a device in a neighbor awareness networking, NAN, cluster.