

3. The method according to claim 1 or 2, wherein the attribute information of the second NAN cluster comprises:

a number of wireless devices in the second NAN cluster, an anchor master rank of the second NAN cluster, a hop count from the wireless device to an anchor master device in the second NAN cluster, or a transmission time of a beacon frame of an anchor master device in the second NAN cluster.

4. The method according to any one of claims 1-3, wherein the event message is a beacon frame or a service frame comprising the CID and the attribute information of the second NAN cluster; or

a beacon frame or a service frame comprising the CID of the second NAN cluster and merging indication information for instructing the other wireless devices in the first NAN cluster that receive the event message to join the second NAN cluster.

5. The method according to claim 4, wherein the event message is:

a beacon frame comprising the CID of the second NAN cluster in a destination address field of the beacon frame, and the attribute information of the second NAN cluster in an NAN attribute information field of the beacon frame;

or

a service frame comprising the CID of the second NAN cluster in a destination address field of the service frame, and the attribute information of the second NAN cluster in a frame body of the service frame.

6. A wireless device comprising:

a memory storing computer executable instructions for the wireless device in a first Neighbor Awareness Network cluster (NAN cluster) to join a second NAN cluster, wherein each of the first and second NAN clusters is a Wi-Fi NAN cluster of Wi-Fi Alliance and comprises a plurality of wireless devices;

a processor is configured to execute the computer executable instructions to perform operations of:

discovering the second NAN cluster, including obtaining attribute information and a cluster ID (CID) of the second NAN cluster;

5 calculating a first score based on multiple pieces of attribute information of the first NAN cluster, and a second score based on multiple pieces of attribute information of the second NAN cluster;

comparing the first score and the second score;

when the second score is greater than the first score:

10 broadcasting an event message to other wireless devices in the first NAN cluster, wherein the event message comprises the CID of the second NAN cluster;

stopping participating in the first NAN Cluster including not contending for serving as a synchronization device in the first NAN Cluster; and

15 joining the second NAN cluster.

7. The wireless device according to claim 6, wherein the multiple pieces of attribute information of the first NAN cluster includes an anchor master rank of the first NAN cluster and a transmission time of a beacon frame of an anchor master
20 device in the first NAN cluster, and the multiple pieces of attribute information of the second NAN cluster includes an anchor master rank of the second NAN cluster and a transmission time of a beacon frame of an anchor master device in the second NAN cluster.

25 8. The wireless device according to claim 6 or 7, wherein the attribute information of the second NAN cluster comprises:

a number of wireless devices in the second NAN cluster, an anchor master rank of the second NAN cluster, a hop count from the wireless device to an anchor master device in the second NAN cluster, or a transmission time of a beacon frame of an
30 anchor master device in the second NAN cluster.

9. The wireless device according to any one of claims 6-8, wherein the event message is:

a beacon frame or a service frame comprising the CID and the attribute information of the second NAN cluster; or

a beacon frame or a service frame comprising the CID of the second NAN cluster and merging indication information for instructing other wireless devices in the first NAN cluster that receive the event message to join the second NAN Cluster.

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

placing the CID of the second NAN cluster in a destination address field of a beacon frame and placing attribute information of the second NAN Cluster in a NAN attribute information field of the beacon frame, and broadcasting the beacon frame as the event message; or

placing the CID of the second NAN Cluster in a destination address field of a service frame and placing attribute information of the second NAN Cluster in a frame body of the service frame, and broadcasting the service frame as the event message.

11. A method performed by a wireless device in an original Neighbor Awareness Network cluster (NAN cluster) to join another NAN cluster, wherein each of the original and the another NAN clusters is a Wi-Fi NAN cluster of Wi-Fi Alliance and comprises a plurality of wireless devices, the method comprising:

discovering a plurality of NAN clusters including obtaining attribute information and a cluster ID (CID) of each of the plurality of NAN clusters;

calculating a score for the original NAN cluster based on multiple pieces of attribute information of the original NAN cluster;

for each of the plurality of NAN clusters, calculating a score based on multiple pieces of attribute information of said each NAN cluster;

comparing the score of the original NAN cluster and a score of a target NAN cluster in the plurality of NAN clusters, wherein the score of the target NAN cluster is the highest among the scores of the plurality of NAN clusters;

when the score of the target NAN cluster is greater than the score of the original
5 NAN cluster:

broadcasting an event message to other wireless devices in the original NAN cluster, wherein the event message comprises the CID of the target NAN cluster;

stopping participating in the original NAN Cluster including not
10 contending for serving as a synchronization device in the original NAN Cluster;
and

joining the target NAN cluster.

12. The method according to claim 11, wherein the multiple pieces of attribute
15 information of the original NAN cluster includes an anchor master rank of the original NAN cluster and a transmission time of a beacon frame of an anchor master device in the original NAN cluster, and the multiple pieces of attribute information of said each NAN cluster includes an anchor master rank of said each NAN cluster and a transmission time of a beacon frame of an anchor master device in said each
20 NAN cluster

13. The method according to claim 11 or 12, wherein the attribute information of said each NAN cluster comprises:

a number of wireless devices in said each NAN cluster, an anchor master rank
25 of said each NAN cluster, a hop count from the wireless device to an anchor master device in said each NAN cluster, or a transmission time of a beacon frame of an anchor master device in said each NAN cluster.

14. The method according to any one of claims 11-13, wherein the event
30 message is

a beacon frame or a service frame comprising the CID and the attribute information of the target NAN cluster; or

a beacon frame or a service frame comprising the CID of the target NAN cluster and merging indication information for instructing the other wireless devices
5 in the original NAN cluster that receive the event message to join the target NAN cluster.

15. The method according to claim 14, wherein the event message is:

a beacon frame comprising the CID of the target NAN cluster in a destination
10 address field of the beacon frame, and the attribute information of the target NAN cluster in an NAN attribute information field of the beacon frame;

or

a service frame comprising the CID of the target NAN cluster in a destination
address field of the service frame, and the attribute information of the target NAN
15 cluster in a frame body of the service frame.

16. A wireless device comprising:

a memory storing computer executable instructions for the wireless device in an
original Neighbor Awareness Network cluster (NAN cluster) to join another NAN
20 cluster, wherein each of the original and the another NAN clusters is a Wi-Fi NAN cluster of Wi-Fi Alliance and comprises a plurality of wireless devices;

a processor is configured to execute the computer executable instructions to perform operations of:

discovering a plurality of NAN clusters including obtaining attribute
25 information and a cluster ID (CID) of each of the plurality of NAN clusters;

calculating a score for the original NAN cluster based on multiple pieces of attribute information of the original NAN cluster;

for each of the plurality of NAN clusters, calculating a score based on multiple pieces of attribute information of said each NAN cluster;

comparing the score of the original NAN cluster and a score of a target NAN cluster in the plurality of NAN clusters, wherein the score of the target NAN cluster is the highest among the scores of the plurality of NAN clusters;

when the score of the target NAN cluster is greater than the score of the original
5 NAN cluster:

broadcasting an event message to other wireless devices in the original NAN cluster, wherein the event message comprises the CID of the target NAN cluster;

stopping participating in the original NAN Cluster including not
10 contending for serving as a synchronization device in the original NAN Cluster;
and

joining the target NAN cluster.

17. The wireless device according to claim 16, wherein the multiple pieces of
15 attribute information of the original NAN cluster includes an anchor master rank of the original NAN cluster and a transmission time of a beacon frame of an anchor master device in the original NAN cluster, and the multiple pieces of attribute information of said each NAN cluster includes an anchor master rank of said each NAN cluster and a transmission time of a beacon frame of an anchor master device
20 in said each NAN cluster.

18. The wireless device according to claim 16 or 17, wherein the attribute information of said each NAN cluster comprises:

a number of wireless devices in said each NAN cluster, an anchor master rank
25 of said each NAN cluster, a hop count from the wireless device to an anchor master device in said each NAN cluster, or a transmission time of a beacon frame of an anchor master device in said each NAN cluster.

19. The wireless device according to any one of claims 16-18, wherein the
30 event message is:

a beacon frame or a service frame comprising the CID and the attribute information of the target NAN cluster; or

a beacon frame or a service frame comprising the CID of the target NAN cluster and merging indication information for instructing the other wireless devices
5 in the original NAN cluster that receive the event message to join the target NAN cluster.

20. The wireless device according to claim 19, wherein the event message is:

a beacon frame comprising the CID of the target NAN cluster in a destination
10 address field of the beacon frame, and the attribute information of the target NAN cluster in an NAN attribute information field of the beacon frame;

or

a service frame comprising the CID of the target NAN cluster in a destination
address field of the service frame, and the attribute information of the target NAN
15 cluster in a frame body of the service frame.

21. A computer-readable medium having a program recorded thereon; wherein the program makes a computer execute the method of any one of claims 1-5.

20 22. A computer-readable medium having a program recorded thereon; wherein the program makes a computer execute the method of any one of claims 11-15.