

CLAIMS

1. A communication apparatus comprising:

requesting means configured to request establishment of datalink complying with NAN (Neighbor Awareness Network) standard with another communication apparatus by transmitting a first signal that is configured according to a predetermined frame format, wherein the predetermined frame format includes, as fields, a Category, an Action to be transmitted following the Category, an OUI to be transmitted following the Action, an OUI Type to be transmitted following the OUI, and a first NAN Attribute to be transmitted following the OUI Type, and wherein in the first signal, type information included in the first NAN Attribute is set to a first value; and

communication means configured to perform communication with the other communication apparatus via the datalink that is established based on the request by the requesting means in a period other than a Discovery Window period for a NAN cluster, in which the communication apparatus and the other communication apparatus participate; and

notification means configured to notify, in a case where the communication with the other communication apparatus via the datalink is to be ended, the other communication apparatus that the datalink is to be ended by transmitting a second signal that is configured according to the predetermined frame format and in which the type information included in the first NAN Attribute is set to a second value different from the first value.

2. The communication apparatus according to claim 1, wherein, the communication means performs the communication with the other communication apparatus via the datalink while the communication apparatus maintains the participation in the NAN cluster.

3. The communication apparatus according to claim 1 or 2, further comprising first receiving means configured to receive, after the notification means transmits the second signal, a response from the other communication apparatus.

4. The communication apparatus according to claim 3, further comprising ending means configured to end, after the notification means transmits the second signal and before the first receiving means receives the response, the communication with the other communication apparatus via the datalink.

5. The communication apparatus according to claim 3, further comprising ending means configured to end, in a case where the first receiving means receives the response, the communication with the other communication apparatus via the datalink.

6. The communication apparatus according to claim 4 or 5, wherein in a case where a plurality of datalinks are established between the communication apparatus and the other communication apparatus, and in a case where the notification means notifies the other communication apparatus that a part of the plurality of datalinks is to be ended, the ending means the communication with the other communication apparatus via the part of the plurality of datalinks, but does not end the communication with the other communication apparatus via another part of the plurality of datalinks.

7. The communication apparatus according to any one of claims 1 to 6, further comprising second receiving means configured to receive, in the

Discovery Window period, a signal indicating a service that is provided by the other communication apparatus.

8. The communication apparatus according to any one of claims 1 to 7, wherein the communication means performs the communication for executing a service that is provided by the other communication apparatus.

9. The communication apparatus according to any one of claims 1 to 8, further comprising transmission means configured to transmit, in the Discovery Window period, a signal indicating a service that is provided by the communication apparatus.

10. The communication apparatus according to any one of claims 1 to 9, wherein the communication means performs the communication for executing a service that is provided by the communication apparatus.

11. The communication apparatus according to any one of claims 1 to 10, wherein the requesting means requests establishment of the datalink by transmitting the first signal that is configured according to the predetermined frame format including a second NAN Attribute in addition to the first NAN Attribute, wherein the second NAN Attribute has an Attribute ID that is different from the first NAN Attribute.

12. The communication apparatus according to claim 11, wherein the second NAN Attribute includes information indicating a period to be requested as a period during which the communication apparatus performs communication using the datalink.

13. The communication apparatus according to any one of claims 1 to 12, wherein the OUI included in the first signal has a same value as the OUI included in the second signal.

14. The communication apparatus according to any one of claims 1 to 13, further comprising determination means configured to determine, between the communication apparatus and the other communication apparatus, a period used for performing communication with the other communication apparatus by the communication apparatus in a case where the requesting means transmits the first signal.

15. A control method of a communication apparatus comprising:
a requesting step of requesting establishment of datalink complying with NAN (Neighbor Awareness Network) standard with another communication apparatus by transmitting a first signal that is configured according to a predetermined frame format, wherein the predetermined frame format includes, as fields, a Category, an Action to be transmitted following the Category, an OUI to be transmitted following the Action, an OUI Type to be transmitted following the OUI, and a first NAN Attribute to be transmitted following the OUI Type, and wherein in the first signal, type information included in the first NAN Attribute is set to a first value; and

a communication step of performing communication with the other communication apparatus via the datalink that is established based on the request in a period other than a Discovery Window period for a NAN cluster, in which the communication apparatus and the other communication apparatus participate; and

a notification step of notifying, in a case where the communication with

the other communication apparatus via the datalink is to be ended, the other communication apparatus that the datalink is to be ended by transmitting a second signal that is configured according to the predetermined frame format and in which the type information included in the first NAN Attribute is set to a second value different from the first value.

16. A program for causing a computer to operate as each means of the communication apparatus according to any one of claims 1 to 14.