

Claims

[Claim 1]

A communication apparatus, comprising:

first communication means for transmitting or receiving a synchronization signal in a period which is repeatedly started at a predetermined cycle and shared with another communication apparatus belonging to a network;

second communication means for performing communication with the other communication apparatus belonging to the network in a period different from a period in which transmission or reception is performed by the first communication means;

reception means for receiving a first signal includes information related to a period which the other communication apparatus is able to perform a communication in a period different from the shared period; and

determination means for determining, based on information included in the first signal received by the reception means, a period for communicating by the second communication means with the other communication apparatus, wherein

in a case where a first period for communicating with a first other communication apparatus has been determined by the determination means and the communication apparatus determines a second period for communicating by the second communication means with a second other communication apparatus different from the first other communication apparatus, the determination means determines the second period so that the first period and the second period at least partially overlap.

[Claim 2]

The communication apparatus according to claim 1, further comprising:

first transmission means for transmitting a second signal including information indicating a period in which the communication apparatus can execute communication by the second communication means in a case of determining the second period, wherein

the determination means determines based on information included in the first signal and information included in the second signal.

[Claim 3]

The communication apparatus according to claim 1, further comprising:

second transmission means for transmitting a signal for starting communication by the second communication means in the second period determined by the determination means.

[Claim 4]

The communication apparatus according to claim 1, further comprising:

control means for restricting data reception control in a period different from a period for communication by the first communication means and a period determined by the determination means.

[Claim 5]

The communication apparatus according to claim 1, wherein in a case where a plurality of periods are determined by the determination means and the communication apparatus communicates by the second communication means with the second other communication apparatus, the determination means determines the second period so that among the plurality of periods, a period for performing communication for executing the same service as a service executed with the second other communication apparatus and the second period at least partially overlap.

[Claim 6]

The communication apparatus according to claim 1, communicates with a plurality of other communication apparatuses by the second communication means in a period in which the first period and the second period overlap.

[Claim 7]

The communication apparatus according to claim 1, wherein the network is a NAN cluster conforming to Neighbor Awareness Networking (NAN).

[Claim 8]

The communication apparatus according to claim 1, wherein the period communicating by the first communication means is a Neighbor Awareness Networking (NAN) Discovery Window (DW).

[Claim 9]

The communication apparatus according to claim 1, wherein the synchronization signal is a Sync Beacon conforming to Neighbor Awareness Networking (NAN).

[Claim 10]

A method of controlling a communication apparatus, including:

first communication step for transmitting or receiving a synchronization signal in a period which is repeatedly started at a predetermined cycle and shared with another communication apparatus belonging to a network;

second communication step for performing communication with the other communication apparatus belonging to the network in a period different from a period in which transmission or reception is performed by the first communication step;

reception step for receiving a first signal includes information related to a period which the other communication apparatus is able to perform a communication in a period different from the shared period; and

determination step for determining, based on information included in the first signal received in the reception step, a period for communicating by the second communication step with the other communication apparatus, wherein

in a case where a first period for communicating with a first other communication apparatus has been determined in the determination step and the communication apparatus determines a second period for communicating in the second communication step with a second other communication apparatus different from the first other communication apparatus, the determination step determines the second period so that the first period and the second period at least partially overlap.

[Claim 11]

A computer program, stored on a recording medium, for causing a computer to function as the communication apparatus according to any one of claims 1-9.