Scope of the Claims

[Claim1]

A communication device in a communication system that supports a wireless mesh network using a wireless LAN, the communication device comprising:

a storing part that stores a definition table where a reception power and a metric value are associated with each other, and a cumulative metric value; and

a ~~receiving part that receives~~processor configured to:

receive a broadcast signal transmitted from another communication device;

~~a calculating part that acquires~~ acquire, from the definition table, a metric value corresponding to a reception power of the received broadcast signal ~~received by the receiving part from the definition table,~~ and then ~~calculates~~calculate a cumulative metric value based on the acquired metric value and a metric value included in the received broadcast signal; and

~~a determining part that updates a~~update the cumulative metric value stored in the storing part to the calculated cumulative metric value if the calculated cumulative metric value is smaller than the cumulative metric value stored in the storing part, and ~~determines~~determine the other communication device transmitting the broadcast signal of the calculated cumulative metric value as a route construction target in the wireless mesh network.

[Claim 2]

The communication device according to claim 1, ~~further comprising a broadcasting part that~~wherein the communication device transmits a broadcast signal containing the calculated cumulative metric value when the communication device operates as a fixed station.

[Claim 3]

The communication device according to claim 2, wherein the ~~broadcasting part is controlled so as to~~communication device does not transmit the broadcast signal containing the calculated cumulative metric value when the communication device operates as a mobile station.

[Claim 4]

The communication device according to ~~any one of claims~~claim 1 ~~to 3~~, wherein the ~~calculating part calculates a~~ processor is configured to calculate the reception power of the received broadcast signal ~~received by the receiving part~~ by adding a reception power of a broadcast signal received in the past and a reception power of a newly received broadcast signal at a predetermined ratio~~.~~, the predetermined ratio can be set to an arbitrary ratio.

[Claim 5]

A communication method performed by a communication device in a communication system that supports a wireless mesh network using a wireless LAN, the communication method comprising:

~~a step of~~ storing, in a storing part, a definition table where reception power and a metric value are associated with each other, and a cumulative metric value;

~~a step of~~ receiving a broadcast signal transmitted from another communication device;

~~a step of~~ acquiring, from the definition table, a metric value corresponding to reception power of the received broadcast signal ~~from the definition table~~, and then calculating a cumulative metric value based on the acquired metric value and a metric value included in the received broadcast signal; and

~~a step of updating a~~updating the cumulative metric value stored in the storing part to the calculated cumulative metric value if the calculated cumulative metric value is smaller than the cumulative metric value stored in the storing part, and determining the other communication device transmitting the broadcast signal of the calculated cumulative metric value as a route construction target in the wireless mesh network.

[Claim 6]

A computer-readable non-transitory recording medium storing a program that causes steps to be performed by a communication device in a communication system that supports a wireless mesh network using wireless LAN, the operations comprising:

storing, in a storing part, a definition table where reception power and a metric value are associated with each other, and a cumulative metric value;

receiving a broadcast signal transmitted from another communication device;

acquiring, from the definition table, a metric value corresponding to reception power of the received broadcast signal, and then calculating a cumulative metric value based on the acquired metric value and a metric value included in the received broadcast signal;

updating the cumulative metric value stored in the storing part to the calculated cumulative metric value if the calculated cumulative metric value is smaller than the cumulative metric value stored in the storing part, and determining the other communication device transmitting the broadcast signal of the calculated cumulative metric value as a route construction target in the wireless mesh network.

[Claim ~~6]~~ 7]

~~A program that executes steps in a~~The communication device ~~of a communication system that supports a wireless mesh network using wireless LAN,~~according to claim 2, wherein the ~~steps comprising:~~

~~—~~processor is configured to calculate the reception power of the received broadcast signal by adding a reception power of a broadcast signal received in the past and a reception power of a ~~step of storing~~newly received broadcast signal at a predetermined ratio.

[Claim 8]

The communication device according to claim 3, wherein the processor is configured to calculate the reception power of the received broadcast signal by adding a reception power of a broadcast signal received in the past and a reception power of a newly received broadcast signal at a predetermined ratio.

[Claim 9]

The communication device according to claim 1, wherein the definition table ~~where~~includes a first set of a reception power and a metric value ~~are associated with each other,~~ and a ~~cumulative~~second set of a reception power and a metric value~~;~~

~~a step of receiving a broadcast signal transmitted from another communication~~

~~device;~~

~~a step of acquiring a~~ , and

the processor is configured to acquire the metric value corresponding to the reception power of the received broadcast signal from a designated set which is either the first set or the second set.

[Claim 10]

The communication device according to claim 1, wherein the definition table~~, and then calculating a cumulative~~ contains a metric value ~~based on the acquired metric value and a metric value included in the received broadcast signal;~~

~~a step of updating a cumulative metric value stored in the storing part to the calculated cumulative metric value if the calculated cumulative metric value is smaller than the cumulative metric value stored in the storing part, and determining the other communication device transmitting the broadcast signal of the calculated cumulative metric value~~indicating that no route is created.

[Claim 11]

The communication device according to claim 4, wherein the predetermined ratio that is set when the communication device operates as a ~~route construction target in the wireless mesh network.~~mobile station, and the predetermined ratio that is set when the communication device operates as a fixed station, are different.