IEEE 802.11-20/0056r0, Preparations for Coordinated OFDMA

NPL 3

IEEE 802.11-20/0617r0, Multi-AP Operation -Basic Definition

NPL 4

IEEE P802.11ax/D6.0, November 2019

NPL 5

IEEE 802.11-19/1582r2, Coordinated AP Time/Frequency Sharing in a Transmit Opportunity in 11be

NPL 6

IEEE 802.11-19/1961r1, Multi-AP Group Establishment, 2020-01-02

NPL 7

IEEE 802.11-19/1972r1, Operation of Virtual BSS for Multi-AP Coordination, 2019-11-05

Summary

[0005] However, methods of controlling a transmission power in radio communication such as a wireless local area network (WLAN) have not been sufficiently discussed.

[0006] A non-limiting example facilitates providing an access point, a terminal, and a communication method each capable of flexibly controlling an uplink transmission power per terminal.

[0007] In one example, the present disclosure includes an access point comprising: control circuitry, which, in operation, generates a parameter relating to uplink transmission power control, based on information on transmission power control received from another access point; and transmission circuitry, which, in operation, transmits a control signal including the parameter.

[0007a] In another example, the present disclosure includes a terminal comprising: reception circuitry, which, in operation, receives a control signal including a parameter that relates to control of an uplink transmission power and is generated based on information on transmission power control received from another access point; and control circuitry, which, in operation, controls the uplink transmission power based on the parameter.

[0007b] In another example, the present disclosure includes a communication method, comprising: generating, by an access point, a parameter relating to uplink transmission power control, based on information on transmission power control received from another access point; and transmitting, by the access point, a control signal including the parameter.

[0007c] In another example, the present disclosure includes a communication method, comprising: receiving, by a terminal, a control signal including a parameter that relates to control of an uplink transmission power and is generated based on information on transmission power control received from another access point; and controlling, by the terminal, the uplink transmission power based on the parameter.

[0007d] In an aspect, the present disclosure refers to an access point, comprising:

control circuitry, which, in operation, generates control information relating to a transmission power control; and

transmission circuitry, which, in operation, transmits to the control information to another access point,

wherein the control information includes a minimum value of a transmission power of the access point, and is used by the another access point to determine a value relating to the transmission power, wherein the access point is a shared access point and the another access point is a sharing access point.

[0007e] In an aspect, the present disclosure refers to a communication method, comprising:

generating, by an access point, a control information relating to a transmission power control; and

transmitting, by the access point, to another access point the control information,

wherein the control information includes a minimum value of a transmission power of the access point; and is used by the another access point to determine a value relating to the transmission power, wherein the access point is a shared access point and the another access point is a sharing access point.

[0008] It should be noted that general or specific examples may be implemented as a system, an apparatus, a method, an integrated circuit, a computer program, a storage medium,

CLAIMS

Claim 1 An access point, comprising:

control circuitry, which, in operation, generates control information relating to a transmission power control; and

transmission circuitry, which, in operation, transmits the control information to another access point,

wherein the control information includes a minimum value of a transmission power of the access point and is used by the another access point to determine a value relating to the transmission power, and wherein the access point is a shared access point and the another access point is a sharing access point.

Claim 2 The access point according to claim 1, wherein the value relating to the transmission power is included in a Trigger frame, the Trigger frame being received from the another access point after a negotiation phase between the access point and the another access point.

Claim 3 The access point according to claim 2, wherein the control information is transmitted at the negotiation phase, which is prior to a coordinated transmission of data from the another access point.

Claim 4 The access point according to claim 2 or 3, wherein the access point is instructed by the Trigger frame to transmit a first Physical layer convergence procedure Protocol Data Unit (PPDU) after a Short Inter Frame Space (SIFS).

Claim 5 The access point according to claim 4, wherein the first PPDU transmitted by the access point and a second PPDU transmitted by the another access point are transmitted simultaneously after the SIFS.

Claim 6 The access point according to claim 5, wherein the second PPDU

comprises a second Trigger frame and includes information relating to transmission power control for an uplink Trigger based PPDU (TB PPDU);
and the second Trigger frame in the second PPDU instructs a transmission of the uplink TB PPDU.

Claim 7 A communication method, comprising:

generating, by an access point, control information relating to a transmission power control; and

transmitting, by the access point, to another access point the control information,

wherein the control information includes a minimum value of a transmission power; and is used by the another access point to determine a value relating to the transmission power, and wherein the access point is a shared access point and the another access point is a sharing access point.