IEEE 802.11-20/1672r2, "UL Beamforming for TB PPDUs in 11be"

NPL 5

IEEE 802.11-19/0804r0, "Multi-AP Transmission Procedure"

NPL 6

IEEE 802.11-21/0366r3, "Discussion on HE or EHT variant differentiation of a trigger frame"

Summary

[0004] However, a method for configuring a format of a control signal controlling uplink transmission in radio communication such as wireless LAN has not been sufficiently studied.

[0005] A non-limiting example of the present disclosure facilitates providing a terminal, a base station, and a communication method each capable of appropriately configuring a format of a control signal controlling uplink transmission.

[0006] A base station according to an aspect of the present disclosure comprises control circuitry, which, in operation, generates a control signal for uplink transmission; and transmission circuitry, which, in operation, transmits the control signal, wherein, the control signal contains common information including a first subfield and a second subfield, the first subfield and the second subfield being related to a type of the control signal, the second subfield indicating information on a version of a radio communication standard, and a third subfield whose configuration is varied depending on the version.

[0006a] In an example, the present disclosure refers to a terminal, comprising, reception circuitry, which, in operation, receives a control signal for uplink transmission, the control signal including information on a version of a radio communication standard and a subfield whose configuration is varied depending on the version in a field common to a plurality of terminals, and control circuitry, which, in operation, determines the configuration based on the information on the version.

[0006b] In an aspect, the present disclosure refers to a communication method, comprising, generating, by a base station, a control signal for uplink transmission; and transmitting, by the base station, the control signal, wherein, the control signal contains common information including a first subfield and a second subfield, the first subfield and the second subfield being related to a type of the control signal, the second subfield indicating information on a version of a radio communication standard, and a third subfield whose configuration is varied depending on the version.

[0006c] In an example, the present disclosure refers to a communication method, comprising, receiving, by a terminal, a control signal for uplink transmission, the control signal including information on a version of a radio communication standard and a subfield whose configuration is varied depending on the version in a field common to a plurality of terminals, and determining, by the terminal, the configuration based on the information on the version.

[0007] Note that these generic or specific examples may be achieved by a system, an apparatus, a method, an integrated circuit, a computer program, or a recoding medium, and also by any combination of the system, the apparatus, the method, the integrated circuit, the computer program, and the recoding medium.

[0008] According to an example of the present disclosure, for example, a format of a control signal controlling uplink transmission can be appropriately configured.

[0009] Additional benefits and advantages of the disclosed examples will

CLAIMS

Claim 1 A base station, comprising:

control circuitry, which, in operation, generates a control signal for uplink transmission; and

transmission circuitry, which, in operation, transmits the control signal, wherein

the control signal contains common information including a first subfield and a second subfield, the first subfield and the second subfield being related to a type of the control signal, the second subfield indicating information on a version of a radio communication standard, and a third subfield whose configuration is varied depending on the version.

Claim 2 The base station according to claim 1, wherein

the information on the version is associated with the type of the control signal.

Claim 3 The base station according to claim 2, further comprising reception circuitry, which, in operation, receives a response signal for the control signal based on the version associated with the type.

Claim 4 The base station according to claim 1, wherein

the control circuitry varies the configuration of the third subfield in the common information in accordance with the version, the third subfield being different from the first subfield and the second subfield.

Claim 5 The base station according to claim 4, wherein

the third subfield includes at least one of a UL Space Time Block Coding (STBC) subfield, a UL Spatial Reuse subfield, a Doppler subfield, and/or a Reserved subfield.

Claim 6 The base station according to claim 4, wherein

the control circuitry configures the third subfield when the version is Extreme High Throughput (EHT).

Claim 7 The base station according to claim 6, wherein

the transmission circuitry transmits information on the type using both the first subfield and the second subfield.

Claim 8 The base station according to claim 1, wherein

the second subfield is configured in a field in the control signal, the field being interpreted as a Reserved field when the version is High Efficiency (HE).

Claim 9 The base station according to claim 1, wherein

the control circuitry configures information on the type of the control signal for a terminal whose version corresponds to Extreme High Throughput (EHT) using both the first subfield and the second subfield.

Claim 10 A communication method, comprising:

generating, by a base station, a control signal for uplink transmission ; and

transmitting, by the base station, the control signal, wherein

the control signal contains common information including a first subfield and a second subfield, the first subfield and the second subfield being related to a type of the control signal, the second subfield indicating information on a version of a radio communication standard, and a third subfield whose configuration is varied depending on the version.