

Citation List

Patent Literature

[0004]

Patent Literature 1:

JP 5774169B

Disclosure of Invention

Technical Problem

[0005]

However, in the method of Patent Literature 1, power consumption related to reception of the PHY header may increase. For example, in the disclosure, since information indicating five transmission types is added to the PLCP header, the size of the PLCP header increases by at least 3 bits. Therefore, a time necessary for a reception process for the PLCP header increases with the increase in size, and the power consumption in the reception process of the PLCP header increases.

[0006]

In this regard, embodiments of the present invention disclose a mechanism which is capable of suppressing the increase in power consumption related to the reception of the PHY header while reducing the power consumption by optimizing whether or not the portion subsequent to the PHY header is received.

Solution to Problem

[0007]

According to a first aspect of the present invention, there is provided a wireless LAN (WLAN) communication device including a communication unit configured to transmit a frame including a physical layer (PHY) header including two pieces of information for identifying direct link communication.

[0008]

According to a second aspect of the present invention, there is provided a wireless LAN (WLAN) communication device including a communication unit configured to receive a physical layer (PHY) header including two pieces of information for identifying direct link communication and receive a portion subsequent to the PHY header on a basis of the two

pieces of information.

[0009]

According to a third aspect of the present invention, there is provided a communication method including transmitting, by a communication unit, a frame including a physical layer (PHY) header including two pieces of information for identifying direct link communication, wherein the two pieces of information include uplink identification information and downlink identification information.

[0010]

According to a fourth aspect of the present invention, there is provided a communication method including: receiving, by a communication unit, a physical layer (PHY) header including two pieces of information for identifying direct link communication; and receiving a portion subsequent to the PHY header on a basis of the two pieces of information, wherein the two pieces of information include uplink identification information and downlink identification information.

[0011]

Disclosed herein is a communication device including a communication unit configured to transmit a frame including a physical layer (PHY) header including two pieces of information for identifying mesh network communication.

[0012]

Disclosed herein is a communication device including a communication unit configured to receive a physical layer (PHY) header including two pieces of information for identifying mesh network communication and receive a portion subsequent to the PHY header on a basis of the two pieces of information.

[0013]

Disclosed herein is a communication method including: transmitting, by a communication unit, a frame including a physical layer (PHY) header including two pieces of information for identifying mesh network communication.

[0014]

Disclosed herein is a communication method including: receiving, by a communication unit, a physical layer (PHY) header including two pieces of information for identifying mesh network communication; and receiving a portion subsequent to the PHY

header on a basis of the two pieces of information.

Advantageous Effects of Invention

[0015]

As described above, according to embodiments of the present invention, a mechanism which is capable of suppressing the increase in the power consumption related to the reception of the PHY header while reducing the power consumption by optimizing whether or not the portion subsequent to the PHY header is received is provided. Note that the effects described above are not necessarily limitative. With or in the place of the above effects, there may be achieved any one of the effects described in this specification or other effects that may be grasped from this specification.

Brief Description of Drawings

[0016]

[FIG. 1] FIG. 1 is a diagram illustrating a schematic configuration of a communication system according to a first embodiment of the present disclosure and an example of setting states of various kinds of information.

[FIG. 2] FIG. 2 is a block diagram illustrating an example of a schematic functional configuration of a communication device according to the embodiment.

[FIG. 3] FIG. 3 is a block diagram illustrating an example of a schematic functional configuration of a wireless communication module according to the embodiment.

[FIG. 4] FIG. 4 is a diagram illustrating a configuration example of a frame transmitted by a transmitting device according to the embodiment.

[FIG. 5] FIG. 5 is a diagram illustrating a configuration example of signaling information in a PHY header of a frame transmitted by a transmitting device according to the embodiment.

[FIG. 6] FIG. 6 is a diagram illustrating a configuration example of signaling information in a PHY header of a frame transmitted by a transmitting device according to the embodiment.

CLAIMS

1. A wireless LAN (WLAN) communication device comprising
a communication unit configured to transmit a frame including a physical layer (PHY) header including two pieces of information for identifying direct link communication,
wherein the two pieces of information include uplink identification information and downlink identification information.
2. The wireless LAN (WLAN) communication device according to claim 1, wherein the communication unit connects data addressed to a direct link communication adaptive device and transmits the connected data as a portion subsequent to the PHY header.
3. The wireless LAN (WLAN) communication device according to claim 1, wherein the PHY header includes a wireless communication network identifier.
4. A wireless LAN (WLAN) communication device comprising
a communication unit configured to receive a physical layer (PHY) header including two pieces of information for identifying direct link communication and receive a portion subsequent to the PHY header on a basis of the two pieces of information,
wherein the two pieces of information include uplink identification information and downlink identification information.
5. The wireless LAN (WLAN) communication device according to claim 4, wherein in a case in which direct link communication is identified by using the uplink identification information and the downlink identification information, the communication unit receives the portion subsequent to the PHY header on a basis of whether or not the communication device is a station.
6. The wireless LAN (WLAN) communication device according to claim 4, wherein the communication unit receives the portion subsequent to the PHY header on a basis of whether or not the communication device is adaptive to the direct link communication.

7. The wireless LAN (WLAN) communication device according to claim 4, wherein the PHY header includes a wireless communication network identifier, and

the communication unit receives the portion subsequent to the PHY header in accordance with whether or not the communication device belongs to a wireless communication network related to the wireless communication network identifier.

8. A wireless LAN (WLAN) communication method comprising
transmitting, by a communication unit, a frame including a physical layer (PHY) header including two pieces of information for identifying direct link communication,
wherein the two pieces of information include uplink identification information and downlink identification information.

9. A wireless LAN (WLAN) communication method comprising:
receiving, by a communication unit, a physical layer (PHY) header including two pieces of information for identifying direct link communication; and
receiving a portion subsequent to the PHY header on a basis of the two pieces of information,
wherein the two pieces of information include uplink identification information and downlink identification information.