CLAIMS

1. A communication device including transmission means for transmitting a physical (PHY) frame including a preamble and a data field, characterized in that

the preamble includes:

a Legacy Short Training Field (L-STF);

a Legacy Long Training Field (L-LTF) arranged immediately after the L-STF in the frame;

a Legacy Signal Field (L-SIG) arranged immediately after the L-LTF in the frame;

a first EHT (Extremely High Throughput) Signal Field (EHT-SIG-A) arranged after the L-SIG in the frame;

a second EHT Signal Field (EHT-SIG-B) arranged immediately after the EHT-SIG-A in the frame;

an EHT Short Training Field (EHT-STF) arranged immediately after the EHT-SIG-B in the frame; and

an EHT Long Training Field (EHT-LTF) arranged immediately after the EHT-STF in the frame, and

the EHT-SIG-B includes a subfield indicating the number of spatial streams allocated to each of not less than one other communication device that communicates with the communication device, and the sum of the numbers of spatial streams is larger than 8.

2. A communication device including reception means for receiving a physical (PHY) frame including a preamble and a data field, characterized in that

the preamble includes:

a Legacy Short Training Field (L-STF);

a Legacy Long Training Field (L-LTF) arranged immediately after the L-STF in the frame;

a Legacy Signal Field (L-SIG) arranged immediately after the L-LTF in the frame;

a first EHT (Extremely High Throughput) Signal Field (EHT-SIG-A) arranged after the L-SIG in the frame;

a second EHT Signal Field (EHT-SIG-B) arranged immediately after the EHT-SIG-A in the frame;

an EHT Short Training Field (EHT-STF) arranged immediately after the EHT-SIG-B in the frame; and

an EHT Long Training Field (EHT-LTF) arranged immediately after the EHT-STF in the frame, and

the EHT-SIG-B includes a subfield indicating the number of spatial streams allocated to the communication device to communicate with another communication device, and the subfield is formed by not less than 4 bits.

3. The communication device according to claim 1 or 2, characterized in that the subfield is a 6-bit Spatial Configuration subfield included in a User field.

4. The communication device according to claim 1 or 2, characterized in that the subfield is an 8-bit Spatial Configuration subfield included in a User field.

5. A control method of a communication device including transmission means for transmitting a physical (PHY) frame including a preamble and a data field, characterized in that

the preamble includes:

a Legacy Short Training Field (L-STF);

a Legacy Long Training Field (L-LTF) arranged immediately after the L-STF in the frame;

a Legacy Signal Field (L-SIG) arranged immediately after the L-LTF in the frame;

a first EHT (Extremely High Throughput) Signal Field (EHT-SIG-A)

arranged after the L-SIG in the frame;

a second EHT Signal Field (EHT-SIG-B) arranged immediately after the EHT-SIG-A in the frame;

an EHT Short Training Field (EHT-STF) arranged immediately after the EHT-SIG-B in the frame; and

an EHT Long Training Field (EHT-LTF) arranged immediately after the EHT-STF in the frame, and

the EHT-SIG-B includes a subfield indicating the number of spatial streams allocated to each of not less than one other communication device that communicates with the communication device, and the sum of the numbers of spatial streams is larger than 8.

6. A control method of a communication device including reception means for receiving a physical (PHY) frame including a preamble and a data field, characterized in that

the preamble includes:

a Legacy Short Training Field (L-STF);

a Legacy Long Training Field (L-LTF) arranged immediately after the L-STF in the frame;

a Legacy Signal Field (L-SIG) arranged immediately after the L-LTF in the frame;

a first EHT (Extremely High Throughput) Signal Field (EHT-SIG-A) arranged after the L-SIG in the frame;

a second EHT Signal Field (EHT-SIG-B) arranged immediately after the EHT-SIG-A in the frame;

an EHT Short Training Field (EHT-STF) arranged immediately after the EHT-SIG-B in the frame; and

an EHT Long Training Field (EHT-LTF) arranged immediately after the

EHT-STF in the frame, and

the EHT-SIG-B includes a subfield indicating the number of spatial streams allocated to the communication device to communicate with another communication device, and the subfield is formed by not less than 4 bits.

7. The control method of the communication device according to claim 5 or 6, characterized in that the subfield is a 6-bit Spatial Configuration subfield included in a User field.

8. The control method of the communication device according to claim 5 or 6, characterized in that the subfield is an 8-bit Spatial Configuration subfield included in a User field.