CLAIMS

[Claim 1] A communication method, applied to a first communication device, wherein the method comprises:

sending a preemption setup request message to a second communication device; and

receiving a preemption setup response message sent by the second communication device, to establish a preemption session with the second communication device.

[Claim 2] The method according to claim 1, wherein the preemption setup request message comprises preemption type information, the preemption type information indicates a preemption transmission mode of the first communication device, and the preemption transmission mode comprises some or all of the following:

a physical layer protocol data unit PPDU-level transmit-end transmission mode;

a PPDU-level receive-end transmission mode;

a transmission opportunity TXOP-level bidirectional transmit-end transmission mode;

a TXOP-level bidirectional receive-end transmission mode;

a TXOP-level hybrid transmit-end transmission mode; and

a TXOP-level hybrid receive-end transmission mode.

[Claim 3] The method according to claim 1 or 2, wherein after receiving the preemption setup response message returned by the second communication device, the method further comprises:

if the first communication device uses a specified preemption transmission mode during the preemption session, disabling an intra-PPDU power save function within a specified time period, wherein the specified preemption transmission mode is the PPDU-level receive-end transmission mode.

[Claim 4] The method according to claim 2 or 3, wherein the preemption type information comprises a plurality of indication fields, each indication field corresponds to one preemption transmission mode, and each indication field indicates whether the first communication device uses a corresponding preemption transmission mode; or

the preemption type information comprises one indication field, and different values of the indication field indicate different combinations of preemption transmission modes used by the first communication device; or

the preemption type information comprises a PPDU indication field or a TXOP indication field, wherein the PPDU indication field indicates whether the first communication device uses a PPDU-level transmission mode, and the TXOP indication field indicates whether the first communication device uses a TXOP-level transmission mode; or

the preemption type information comprises a transmit-end indication field or a receive-end

indication field, wherein the transmit-end indication field indicates whether the first communication device uses a preemption transmission mode when serving as a transmit end, and the receive-end indication field indicates whether the first communication device uses a preemption transmission mode when serving as a receive end.

[Claim 5] The method according to any one of claims 2 to 4, wherein the preemption setup request message comprises at least one of first traffic identifier information, second traffic identifier information, or first preemption duration information, wherein

the first traffic identifier information is a traffic identifier of a low-latency service for which the first communication device allows a data packet to be transmitted in a preemption transmission mode, the second traffic identifier information is a traffic identifier of a non-low-latency service for which the first communication device allows transmission to be interrupted, and the first preemption duration information indicates maximum duration for which the first communication device allows an obtained TXOP to be occupied by a communication device other than the first communication device in a preemption transmission mode.

[Claim 6] The method according to any one of claims 2 to 5, wherein the preemption setup response message comprises status indication information, and the status indication information indicates whether the preemption session is successfully established.

[Claim 7] The method according to claim 6, wherein the preemption setup response message further comprises at least one of preemption type information, third traffic identifier information, fourth traffic identifier information, or second preemption duration information of the second communication device, wherein

the preemption type information of the second communication device indicates a preemption transmission mode of the second communication device, the third traffic identifier information is a traffic identifier of a low-latency service for which the second communication device allows a data packet to be transmitted in a preemption transmission mode, the fourth traffic identifier information is a traffic identifier of a non-low-latency service for which the second communication device allows transmission to be interrupted, and the second preemption duration information indicates maximum duration for which the second communication device allows an obtained TXOP to be occupied by a communication device other than the second communication device in a preemption transmission mode.

[Claim 8] The method according to any one of claims 1 to 5, wherein the first communication device is a terminal device, the second communication device is an access point device, and before sending the preemption setup request message to the second communication device, the method further comprises:

receiving a beacon frame sent by the second communication device through broadcasting,

wherein the beacon frame comprises at least one of preemption type information, third traffic identifier information, fourth traffic identifier information, or second preemption duration information of the second communication device, wherein

the preemption type information of the second communication device indicates a preemption transmission mode of the second communication device, the third traffic identifier information is a traffic identifier of a low-latency service for which the second communication device allows a data packet to be transmitted in a preemption transmission mode, the fourth traffic identifier information is a traffic identifier of a non-low-latency service for which the second communication device allows transmission to be interrupted, and the second preemption duration information indicates maximum duration for which the second communication device allows an obtained TXOP to be occupied by a communication device other than the second communication device in a preemption transmission mode.

[Claim 9] The method according to any one of claims 1 to 7, wherein the preemption setup request message is a target wake time TWT setup request message, and the preemption setup response message is a TWT setup response message.

[Claim 10] The method according to claim 9, wherein the TWT setup request message comprises first indication information, and the first indication information is used to request to use preemption transmission in a corresponding restricted target wake time service period restricted TWT SP.

[Claim 11] The method according to claim 9 or 10, wherein the first communication device is a terminal device, the second communication device is an access point device, and before sending the preemption setup request message to the second communication device, the method further comprises:

receiving a beacon frame sent by the second communication device, wherein the beacon frame comprises a restricted TWT element restricted TWT element, the restricted TWT element comprises second indication information, and the second indication information indicates that preemption transmission is allowed.

[Claim 12] The method according to any one of claims 1 to 11, wherein after receiving the preemption setup response message returned by the second communication device, the method further comprises:

receiving a first data packet sent by the second communication device, wherein the first data packet comprises preemption indication information; and

sending data of a low-latency service to the second communication device through preemption transmission based on the preemption indication information in the first data packet.

[Claim 13] A communication method, applied to a second communication device, wherein

the method comprises:

receiving a preemption setup request message sent by a first communication device; and

sending a preemption setup response message to the first communication device, to establish a preemption session with the first communication device.

[Claim 14] The method according to claim 13, wherein the preemption setup response message comprises status indication information, and the status indication information indicates whether the preemption session is successfully established.

[Claim 15] The method according to claim 14, wherein the preemption setup response message further comprises at least one of preemption type information, third traffic identifier information, fourth traffic identifier information, or second preemption duration information of the second communication device, wherein

the preemption type information indicates a preemption transmission mode of the second communication device, the third traffic identifier information is a traffic identifier of a low-latency service for which the second communication device allows a data packet to be transmitted in a preemption transmission mode, the fourth traffic identifier information is a traffic identifier of a non-low-latency service for which the second communication device allows transmission to be interrupted, and the second preemption duration information indicates maximum duration for which the second communication device allows an obtained TXOP to be occupied by a communication device other than the second communication device in a preemption transmission mode.

[Claim 16] The method according to claim 15, wherein the preemption transmission mode comprises some or all of the following:

a physical layer protocol data unit PPDU-level transmit-end transmission mode;

a PPDU-level receive-end transmission mode;

a transmission opportunity TXOP-level bidirectional transmit-end transmission mode;

a TXOP-level bidirectional receive-end transmission mode;

a TXOP-level hybrid transmit-end transmission mode; and

a TXOP-level hybrid receive-end transmission mode.

[Claim 17] The method according to claim 13 or 14, wherein the second communication device is an access point device, the first communication device is a terminal device, and before receiving the preemption setup request message sent by the first communication device, the method further comprises:

sending a beacon frame through broadcasting, wherein the beacon frame comprises at least one of preemption type information, third traffic identifier information, fourth traffic identifier information, or second preemption duration information of the second communication device,

wherein

the preemption type information of the second communication device indicates a preemption transmission mode of the second communication device, the third traffic identifier information is a traffic identifier of a low-latency service for which the second communication device allows a data packet to be transmitted in a preemption transmission mode, the fourth traffic identifier information is a traffic identifier of a non-low-latency service for which the second communication device allows transmission to be interrupted, and the second preemption duration information indicates maximum duration for which the second communication device allows an obtained TXOP to be occupied by a communication device other than the second communication device in a preemption transmission mode.

[Claim 18] A communication device, comprising a memory and a processor, wherein the memory stores a computer program, and the processor is configured to read and execute the computer program stored in the memory, to enable the method according to any one of claims 1 to 17 to be performed.

[Claim 19] A computer-readable storage medium, storing computer-executable instructions, wherein the computer-executable instructions are used to enable a computer to perform the method according to any one of claims 1 to 17.

[Claim 20] A computer program product, comprising computer-executable instructions, wherein the computer-executable instructions are used to enable a computer to perform the method according to any one of claims 1 to 17.