Table 2 Function of each field in the PPDU

Chinese expression	Function
Legacy short training field (Legacy Short Training Field, L-STF)	Used for PPDU discovery, coarse synchronization, and automatic gain control
Legacy long training field (Legacy Long Training Field, L-LTF)	Used for fine synchronization and channel estimation
Legacy signal field (Legacy Signal Field, L-SIG)	Used to carry signaling information related to a PPDU length to ensure coexistence
Universal signal field (Universal Signal Field, U-SIG)	Used to carry signaling for demodulating subsequent data
Extremely high throughput short training field (Extremely High Throughput Short Training Field, EHT-STF)	Used for automatic gain control for a subsequent field
Extremely high throughput long training field (Extremely High Efficient Long Training Field, EHT-LTF)	Used for channel estimation
Data (Data)	Used to carry data information

[00140] With the development of a wireless local area network, a data rate required by the station to perform uplink data transmission increases. How the access point allocates a plurality of resource units to the station and indicates the plurality of resource units to the station, so that the station may perform uplink data transmission by using the plurality of resource units to increase the data rate becomes a problem that needs to be urgently resolved.

[00141] This application provides a resource unit indication method. In the method, an access point can allocate an MRU to a station. The resource unit indication method may also be referred to as a multi-resource unit indication method, a multi-resource unit combination method, or the like. In embodiments of this application, the MRU is allocated to the station by using a trigger frame, and a resource unit allocation subfield in the trigger frame is designed, to implement allocation of an RU/MRU in 320 MHz. The trigger frame designed in embodiments of this application is applicable to a case, in 802.11be (EHT) and a future Wi-Fi system, in which there is

part of bits.

[00164] This application further provides a resource unit indication method according to a fourth aspect. In this aspect, a first part of bits and a second part of bits may be combined into one part for indication. That is, when a resource unit allocated to a station is indicated, all bits in a resource unit allocation subfield are used for indication, and distinction is no longer made for the first part of bits used to indicate a frequency range and the second part of bits used to indicate a resource unit. For example, the resource unit allocation subfield corresponding to the station occupies N bits, and an index indicated by the N bits directly represents an absolute location of an RU or a multi-resource unit MRU in a bandwidth; and then the station may learn of the allocated RU/MRU by querying a table based on the index indicated by the N bits. Therefore, in this application, a resource unit indication method 410 is described by using an example in which "the index indicated by the N bits directly represents the absolute location of the RU or the multi-resource unit MRU in the bandwidth".

[00165] The following separately describes the resource unit indication method 110, the resource unit indication method 120, the resource unit indication method 210, the resource unit indication method 220, the resource unit indication method 310, and the resource unit indication method 410 with reference to the accompanying drawings.

[00166] Embodiment 1: The resource unit indication method 110 is mainly described in Embodiment 1.

[00167] FIG. 6 is a schematic flowchart of the resource unit indication method 110 according to this embodiment of this application. As shown in FIG. 6, the resource unit indication method 110 may include but is not limited to the following steps.

[00168] S111. An access point determines a trigger frame.

[00169] The trigger frame includes a resource unit allocation subfield used to indicate to allocate a resource to a station. The resource unit allocation subfield includes a frequency band range indication and a resource unit indication. The resource unit indication is used to indicate a multi-resource unit MRU allocated to the corresponding station. The frequency band range indication is used to indicate 80 MHz in which a smallest resource unit RU in the MRU indicated by the resource unit indication is located.

[00170] S112. The access point sends the trigger frame.

[00171] S113. The station receives the trigger frame from the access point.

indication method 110 may carry more information, in other words, may carry the 80 MHz in which the smallest RU in the MRU is located. For example, if the frequency band range indication indicates only the lowest 80 MHz related to the MRU, the resource unit indication needs four indexes to respectively indicate the four combinations of the (996+484)-tone RU shown in FIG. 10. If the frequency band range indication is used to indicate the 80 MHz in which the smallest RU in the MRU is located, the resource unit indication needs only two indexes to indicate all the combinations of the (996+484)-tone RU, as shown in Table 4. Therefore, the frequency band range indication in the resource unit indication method 101 may carry more information, and this helps the resource unit indication to use a smaller number of indexes to respectively indicate various possible locations of the MRU.

[00202] An embodiment of this application further provides a technical solution, and relates to another design of a resource unit allocation subfield (RU Allocation subfield) in a user information field (User Info field) in a trigger frame (Trigger frame). As described in the foregoing embodiment, the RU allocation subfield is designed by using 9 bits, and is specifically implemented in a form of a 7-bit resource unit indication+a 2-bit frequency band range indication. Herein, 2 bits are the frequency band range indication, and are used to indicate a location of specific 80 MHz. The resource unit indication that includes the other 7 bits is used to indicate a specific location of an RU/MRU in a specific 80 MHz case determined by using the 2 bits.

[00203] For example, as shown in Table 3, the 2 bits are used to indicate a location of specific 80 MHz at an absolute frequency, where 00 indicates lowest 80 MHz, 01 indicates second lowest 80 MHz, 10 indicates second highest 80 MHz, and 11 indicates highest 80 MHz.

[00204] To help a receiving device better identify that a corresponding user information field is an HE/EHT user information field, facilitate compatibility with a previous-generation device (11ax) in the user information field, and son on, a 7-bit+2-bit mode is provided. A primary/secondary location indication method is used for 2 bits, and the 2 bits indicate a location of 80 MHz in which a smallest RU in an RU/MRU is located.

[00205] In the foregoing case, when an 80 MHz primary/secondary location indication method is used, there may be following several specific designs for the RU allocation subfield.

[00206] The following further describes advantages of using the primary/secondary location indication method. The 2 bits in the primary/secondary indication method are represented by BS and B0 (which may be represented by other letters, for example, B0B1 in the foregoing

7-bit resource unit indication in the foregoing embodiment. It is equivalent to that there is an operation of switching the receive end device from a relative location to an absolution location. The receive end device herein may be a non-AP STA.

[00212] Table 4(1) that shows the 2-bit correspondence between the primary/secondary indication and the absolute frequency indication is as follows.

Table 4(1)

Absolute frequency (absolute frequency)	Case a in 320 MHz (case a in 320 MHz)	Case b in 320 MHz (case b in 320 MHz)	Case c in 320 MHz (case c in 320 MHz)	Case d in 320 MHz (case d in 320 MHz)
Lowest 80 MHz (00)	a0 (00, primary 80)	b1 (01, secondary 80)	c2 (10, 3rd 80 MHz)	d2 (10, 3rd 80 MHz)
Second lowest 80 MHz (01)	a1 (01, secondary 80)	b0 (00, primary 80)	c3 (11, 4th 80 MHz)	d3 (11, 4th 80 MHz)
Second highest 80 MHz (10)	a2 (10, 3rd 80 MHz)	b2 (10, 3rd 80 MHz)	c0 (00, primary 80)	d1 (01, secondary 80)
Highest 80 MHz (11)	a3 (11, 4th 80 MHz)	b3 (11, 4th 80 MHz)	c1 (01, secondary 80)	d0 (00, primary 80)

[00213] Note: BS and B0 herein may indicate 80 MHz in which a smallest RU in an MRU or RU is located, and the primary/secondary location indication method is used. For example, a 3*996-tone RU includes a (2*996+996)-tone RU. In this case, a location of 80 MHz in which a 996-tone RU is located may be indicated herein. For another example, for a (3*996+484)-tone RU, a location of 80 MHz in which a 484-tone RU is located may be indicated.

[00214] As described above, in the RU allocation subfield, 2 bits may be used to indicate a location of specific 80 MHz. The indication form may be that 00 indicates the primary 80 MHz, 01 indicates the secondary 80 MHz, 10 indicates the third 80 MHz (lower 80 MHz in S160), and 11 indicates the fourth 80 MHz (upper 80 MHz in S160).

Table 8 Resource unit allocation table

B8 to B0 in the resource unit allocation subfield (B8–B0 of RU Allocation subfield)	RU size	Number of entries
0–143	26	144
144–207	52	64
208–239	106	32
240–255	242	16
256–263	484	8
264–267	996	4
268–269	2×996	2
270	4×996	1
271–318	52+26	12*4
319–350	106+26	8*4
351–366	484+242	4*4
367–374	996+484	2*4
375–386	2×996+484	12=6*2
387–390	3×996	4
391–398	3×996+484	8
399–414	996+484+242	8+8

[00399] As shown in FIG. 3, there are 36 locations for the 26-tone RU in 80 MHz, and therefore there are 144 (namely, 4*36) locations for the 26-tone RU in 320 MHz. Therefore, as shown in Table 8, B8 to B0 need to indicate one of the indexes 0 to 143, to indicate one 26-tone RU.

[00400] As shown in FIG. 3, there are 16 locations for the 52-tone RU in 80 MHz, and therefore there are 64 (namely, 4*16) locations for the 52-tone RU in 320 MHz. Therefore, B8 to B0 need to indicate one of the indexes 144 to 207, to indicate one 52-tone RU.

[00401] As shown in FIG. 3, there are eight locations for the 106-tone RU in 80 MHz, and therefore there are 32 (namely, 4*8) locations for the 106-tone RU in 320 MHz. Therefore, B8 to B0 need to indicate one of the indexes 208 to 239, to indicate one 106-tone RU.

The communication apparatus may be an independent device or a part of a relatively large device. For example, the communication apparatus may be:

(1) an independent integrated circuit IC, a chip, or a chip system or subsystem;

(2) a set including one or more ICs, where optionally, the IC set may further include a storage component configured to store data and instructions;

(3) an ASIC, for example, a modem (Modem);

(4) a module that can be embedded in another device;

(5) a receiver, an intelligent terminal, a wireless device, a handset, a mobile unit, a vehicle-mounted device, a cloud device, an artificial intelligence device, or the like; or

(6) others, or the like.

[00487] In a case in which the communication apparatus may be a chip or a chip system, refer to a schematic diagram of a structure of a chip shown in FIG. 22. The chip 700 shown in FIG. 22 includes a processor 701 and an interface 702. There may be one or more processors 701, and there may be a plurality of interfaces 702.

[00488] In a case in which the chip is configured to implement a function of the station in embodiments of this application,

the interface 702 is configured to: perform the operation in S113 in FIG. 6, perform the operation in S123 in FIG. 15, perform the operation in S213 in FIG. 16, perform the operation in S223 in FIG. 17, perform the operation in S313 in FIG. 18, and perform the operation in S413 in FIG. 19. The processor 701 is configured to: perform the operation in S114 in FIG. 6, perform the operation in S124 in FIG. 15, perform the operation in S214 in FIG. 16, perform the operation in S224 in FIG. 17, perform the operation in S314 in FIG. 18, and perform the operation in S414 in FIG. 19.

[00489] In a case in which the chip is configured to implement a function of the access point in embodiments of this application,

the interface 702 is configured to: perform the operation in S112 in FIG. 6, perform the operation in S122 in FIG. 15, perform the operation in S212 in FIG. 16, perform the operation in S222 in FIG. 17, perform the operation in S312 in FIG. 18, and perform the operation in S412 in FIG. 19. The processor 701 is configured to: perform the operation in S111 in FIG. 6, perform the operation in S121 in FIG. 15, perform the operation in S211 in FIG. 16, perform the operation in S221 in FIG. 17, perform the operation in S311 in FIG. 18, and perform the operation in S411 in

FIG. 19.

[00490] It may be learned that the chip can allocate the MRU to the station, so that the MRU is more flexibly allocated, to help improve frequency band utilization. In addition, a frequency band range indication in this application carries more information, and therefore the number of indexes required for a resource unit indication to indicate each MRU is reduced. Alternatively, the chip performs a related operation in FIG. 19, to simplify processing logic, so as to alleviate a processing burden of the station.

[00491] Optionally, the chip further includes a memory 703 coupled to the processor 701, and the memory 703 is configured to store program instructions and data that are necessary for a the chip.

[00492] For related content of this implementation, refer to related content of the foregoing method embodiments. Details are not described herein again.

[00493] A person skilled in the art may further understand that various illustrative logical blocks (illustrative logical blocks) and steps (steps) that are listed in embodiments of this application may be implemented by using electronic hardware, computer software, or a combination thereof. Whether the functions are implemented by using hardware or software depends on particular applications and a design requirement of an entire system. A person skilled in the art may use various methods to implement the described functions for each particular application, but it should not be considered that the implementation goes beyond the scope of embodiments of this application.

[00494] This application further provides a computer-readable storage medium. The computer-readable storage medium stores a computer program. When the computer-readable storage medium is executed by a computer, functions of any one of the foregoing method embodiments are implemented.

[00495] This application further provides a computer program product. When the computer program product is executed by a computer, functions of any one of the foregoing method embodiments are implemented.

[00496] All or some of the foregoing embodiments may be implemented by using software, hardware, firmware, or any combination thereof. When software is used to implement embodiments, all or some of embodiments may be implemented in a form of a computer program product. The computer program product includes one or more computer instructions. When the

CLAIMS

What is claimed is:

1. A resource unit indication method, wherein the method comprises:

receiving, by a station, a trigger frame from an access point, wherein

the trigger frame comprises a resource unit allocation subfield used to indicate to allocate a resource to the station, the resource unit allocation subfield comprises a frequency band range indication and a resource unit indication, the resource unit indication is used to indicate a multi-resource unit (MRU) allocated to the station, and the frequency band range indication is used to indicate a frequency band range in which a smallest resource unit RU in the MRU corresponds to; and

determining, by the station, the allocated MRU based on the frequency band range indication and the resource unit indication.

2. A resource unit indication method, wherein the method comprises:

determining, by an access point, a trigger frame, wherein

the trigger frame comprises a resource unit allocation subfield used to indicate to allocate a resource to a station, the resource unit allocation subfield comprises a frequency band range indication and a resource unit indication, the resource unit indication is used to indicate a multi-resource unit (MRU) allocated to the corresponding station, and the frequency band range indication is used to indicate a frequency band range in which a smallest resource unit RU in the MRU indicated by the resource unit indication corresponds to; and

sending, by the access point, the trigger frame.

3. The method according to claim 1 or 2, wherein

the frequency band range indication is used to indicate 80 MHz in which the smallest resource unit RU in the MRU corresponds to.

4. The method according to any one of claims 1 to 3, wherein

the MRU indicated by the resource unit indication comprises one resource unit (26-tone RU) whose size is 26 subcarriers and one resource unit (52-tone RU) whose size is 52 subcarriers, and the frequency band range indicated by the frequency band range indication is a frequency band range in which the 26-tone RU corresponds to; or

the MRU indicated by the resource unit indication comprises one RU (106-tone RU) whose

size is 106 subcarriers and one 26-tone RU, and the frequency band range indicated by the frequency band range indication is a frequency band range in which the 26-tone RU corresponds to; or

the MRU indicated by the resource unit indication comprises one resource unit (484-tone RU) whose size is 484 subcarriers and one resource unit (242-tone RU) whose size is 242 subcarriers, and the frequency band range indicated by the frequency band range indication is a frequency band range in which the 242-tone RU corresponds to; or

the MRU indicated by the resource unit indication comprises one resource unit (996-tone RU) whose size is 996 subcarriers and one 484-tone RU, and the frequency band range indicated by the frequency band range indication is a frequency band range in which the 484-tone RU corresponds to; or

the MRU indicated by the resource unit indication comprises two 996-tone RUs and one 484-tone RU, and the frequency band range indicated by the frequency band range indication is a frequency band range in which the 484-tone RU corresponds to; or

the MRU indicated by the resource unit indication comprises two 996-tone RUs, and the frequency band range indicated by the frequency band range indication is a frequency band range in which one of the 996-tone RUs corresponds to; or

the MRU indicated by the resource unit indication comprises three 996-tone RUs and one 484-tone RU, and the frequency band range indicated by the frequency band range indication is a frequency band range in which the 484-tone RU corresponds to; or

the MRU indicated by the resource unit indication comprises one 996-tone RU, one 484-tone RU, and one 242-tone RU, and the frequency band range indicated by the frequency band range indication is a frequency band range in which the 242-tone RU corresponds to.

5. The method according to claim 1 or 2, wherein

the frequency band range indication is used to indicate 160 MHz in which the smallest resource unit RU in the MRU corresponds to.

6. The method according to claim 5, wherein the MRU indicated by the resource unit indication comprises two resource units (two 996-tone RUs), the size of each 996-tone RU is 996 subcarriers, and one resource unit (484-tone RU) whose size is 484 subcarriers, and the frequency band range indicated by the frequency band range indication is a frequency band range in which the 484-tone RU corresponds to.

7. The method according to claim 5 or 6, wherein

if the MRU indicated by the resource unit indication is a (2*996+484)-tone RU, when the 80 MHz indicated by the frequency band range indication is first 80 MHz or second 80 MHz in 320 MHz, it indicates that 240 MHz in which the (2*996+484)-tone RU corresponds to is the first 80 MHz to third 80 MHz in the 320 MHz; or when the 80 MHz indicated by the frequency band range indication is third 80 MHz or fourth 80 MHz in 320 MHz, it indicates that 240 MHz in which the (2*996+484)-tone RU corresponds to is second 80 MHz to the fourth 80 MHz in the 320 MHz.

8. The method according to any one of claims 1 to 7, wherein

indexes of RUs/MRUs of a same size in ascending order correspond to start frequencies of the RUs/MRUs in ascending order.

9. The method according to any one of claims 1 to 7, wherein

indexes of RUs/MRUs of a same size in ascending order correspond to start frequencies, in ascending order, of punctured RUs in a bandwidth in which the RUs/MRUs are located.

10. The method according to any one of claims 1 to 9, wherein the resource unit allocation subfield comprises 9 bits, the frequency band range indication comprises 2 bits, and the resource unit indication comprises 7 bits.

11. The method according to any one of claims 1 to 10, wherein the resource unit indication comprises one index, wherein the index indicates a size of the MRU, or the index indicates a size of the MRU and a relative location of the MRU.

12. The method according to any one of claims 1 to 11, wherein the resource unit indication comprises an index, and the index is one of multiple indexes in the following:

index "68", which indicates a MRU comprising two 484-tone RUs allocated to the one station;

index "69", which indicates a MRU comprising four 996-tone RUs allocated to the one station;

indexes "70-81", each of which indicates a MRU comprising one 52-tone RU and one 26-tone RU allocated to the one station;

indexes "82-89", each of which indicates a MRU comprising one 106-tone RU and one 26-tone RU allocated to the one station;

indexes "90-93", each of which indicates a MRU comprising one 484-tone RU and one 242-tone RU allocated to the one station;

indexes "94-95", each of which indicates a MRU comprising one 996-tone RU and one 484-tone RU allocated to the one station;

indexes "96-99", each of which indicates a MRU comprising one 996-tone RU, one 484-tone RU and one 242-tone RU allocated to the one station;

indexes "96-99", each of which indicates a MRU comprising one 996-tone RU, one 484-tone RU and one 242-tone RU allocated to the one station;

indexes "100-103", each of which indicates a MRU comprising two 996-tone RUs and one 484-tone RU allocated to the one station;

index "104", which indicates a MRU comprising three 996-tone RUs allocated to the one station;

indexes "105-106", each of which indicates a MRU comprising three 996-tone RUs and one 484-tone RU allocated to the one station;

indexes "107-127", each of which reserved.

13. The method according to any one of claims 1 to 12, wherein the resource unit indication comprises an index, an MRU indicated by the resource unit indication corresponds to one or more indexes, and a correspondence between the MRU and a quantity of indexes is one or more of the following:

An MRU comprising two 996-tone RUs correspond to one index;

An MRU comprising four 996-tone RUs corresponds to one index;

An MRU comprising one 52-tone RU and one 26-tone RU corresponds to 12 indexes;

An MRU comprising one 106-tone RU and one 26-tone RU corresponds to eight indexes;

An MRU comprising one 484-tone RU and one 242-tone RU corresponds to four indexes;

An MRU comprising one 996-tone RU and one 484-tone RU corresponds to two indexes;

An MRU comprising two 996-tone RUs and one 484-tone RU corresponds to four indexes;

An MRU comprising three 996-tone RUs and one 484-tone RU corresponds to two indexes;

An MRU comprising three 996-tone RUs corresponds to one index;

An MRU comprising one 996-tone RU, one 484-tone RU, and one 242-tone RU correspond to four indexes.

14. The method according to any one of claims 1 to 13, wherein the frequency band range indication and the resource unit indication are used to indicate a size and a location of the MRU.

15. An communication apparatus, comprising:

a processing unit, configured to determine a trigger frame, wherein

the trigger frame comprises a resource unit allocation subfield used to indicate to allocate a

resource to a station, the resource unit allocation subfield comprises a frequency band range indication and a resource unit indication, the resource unit indication is used to indicate a multi-resource unit MRU allocated to the corresponding station, and the frequency band range indication is used to indicate a frequency band range in which a smallest resource unit RU in the MRU corresponds to; and

a communication unit, configured to send the trigger frame.

16. A communication apparatus, comprising:

a communication unit, configured to receive a trigger frame from an access point, wherein

the trigger frame comprises a resource unit allocation subfield used to indicate to allocate a resource to the station, the resource unit allocation subfield comprises a frequency band range indication and a resource unit indication, the resource unit indication is used to indicate a multi-resource unit MRU allocated to the corresponding station, and the frequency band range indication is used to indicate a frequency band range in which a smallest resource unit RU in the MRU corresponds to; and

a processing unit, configured to determine the allocated MRU based on the frequency band range indication and the resource unit indication.

17. The communication apparatus according to claim 15 or 16, wherein

the frequency band range indication is used to indicate 80 MHz in which the smallest resource unit RU in the MRU corresponds to.

18. The communication apparatus according to any one of claims 15 to 17, wherein

the MRU indicated by the resource unit indication comprises one resource unit (26-tone RU) whose size is 26 subcarriers and one resource unit (52-tone RU) whose size is 52 subcarriers, and the frequency band range indicated by the frequency band range indication is a frequency band range in which the 26-tone RU corresponds to; or

the MRU indicated by the resource unit indication comprises one RU (106-tone RU) whose size is 106 subcarriers and one 26-tone RU, and the frequency band range indicated by the frequency band range indication is a frequency band range in which the 26-tone RU corresponds to; or

the MRU indicated by the resource unit indication comprises one resource unit (484-tone RU) whose size is 484 subcarriers and one resource unit (242-tone RU) whose size is 242 subcarriers, and the frequency band range indicated by the frequency band range indication is a frequency band

range in which the 242-tone RU corresponds to; or

the MRU indicated by the resource unit indication comprises one resource unit (996-tone RU) whose size is 996 subcarriers and one 484-tone RU, and the frequency band range indicated by the frequency band range indication is a frequency band range in which the 484-tone RU corresponds to; or

the MRU indicated by the resource unit indication comprises two 996-tone RUs and one 484-tone RU, and the frequency band range indicated by the frequency band range indication is a frequency band range in which the 484-tone RU corresponds to; or

the MRU indicated by the resource unit indication comprises two 996-tone RUs, and the frequency band range indicated by the frequency band range indication is a frequency band range in which one of the 996-tone RUs corresponds to; or

the MRU indicated by the resource unit indication comprises three 996-tone RUs and one 484-tone RU, and the frequency band range indicated by the frequency band range indication is a frequency band range in which the 484-tone RU corresponds to; or

the MRU indicated by the resource unit indication comprises one 996-tone RU, one 484-tone RU, and one 242-tone RU, and the frequency band range indicated by the frequency band range indication is a frequency band range in which the 242-tone RU corresponds to.

19. The communication apparatus according to claim 15 or 16, wherein

the frequency band range indication is used to indicate 160 MHz in which the smallest resource unit RU in the MRU corresponds to.

20. The communication apparatus according to claim 19, wherein the MRU indicated by the resource unit indication comprises two resource units (two 996-tone RUs), the size of each 996-tone RU is 996 subcarriers, and one resource unit (484-tone RU) whose size is 484 subcarriers, and the frequency band range indicated by the frequency band range indication is a frequency band range in which the 484-tone RU corresponds to.

21. The communication apparatus according to claim 19 or 20, wherein

if the MRU indicated by the resource unit indication is a (2*996+484)-tone RU, when the 80 MHz indicated by the frequency band range indication is first 80 MHz or second 80 MHz in 320 MHz, it indicates that 240 MHz in which the (2*996+484)-tone RU corresponds to is the first 80 MHz to third 80 MHz in the 320 MHz; or when the 80 MHz indicated by the frequency band range indication is third 80 MHz or fourth 80 MHz in 320 MHz, it indicates that 240 MHz in which the

(2*996+484)-tone RU corresponds to is second 80 MHz to the fourth 80 MHz in the 320 MHz.

22. The communication apparatus according to any one of claims 15 to 21, wherein

indexes of RUs/MRUs of a same size in ascending order correspond to start frequencies of the RUs/MRUs in ascending order.

23. The communication apparatus according to any one of claims 15 to 21, wherein

indexes of RUs/MRUs of a same size in ascending order correspond to start frequencies, in ascending order, of punctured RUs in a bandwidth in which the RUs/MRUs are located.

24. The communication apparatus according to any one of claims 15 to 23, wherein the resource unit allocation subfield comprises 9 bits, the frequency band range indication comprises 2 bits, and the resource unit indication comprises 7 bits.

25. The communication apparatus according to any one of claims 15 to 24, wherein the resource unit indication comprises one index, wherein the index indicates a size of the MRU, or the index indicates a size of the MRU and a relative location of the MRU.

26. The communication apparatus according to any one of claims 15 to 25, wherein the resource unit indication comprises an index, and the index is one of multiple indexes in the following:

index "68", which indicates a MRU comprising two 484-tone RUs allocated to the one station;

index "69", which indicates a MRU comprising four 996-tone RUs allocated to the one station;

indexes "70-81", each of which indicates a MRU comprising one 52-tone RU and one 26-tone RU allocated to the one station;

indexes "82-89", each of which indicates a MRU comprising one 106-tone RU and one 26-tone RU allocated to the one station;

indexes "90-93", each of which indicates a MRU comprising one 484-tone RU and one 242-tone RU allocated to the one station;

indexes "94-95", each of which indicates a MRU comprising one 996-tone RU and one 484-tone RU allocated to the one station;

indexes "96-99", each of which indicates a MRU comprising one 996-tone RU, one 484-tone RU and one 242-tone RU allocated to the one station;

indexes "96-99", each of which indicates a MRU comprising one 996-tone RU, one 484-tone RU and one 242-tone RU allocated to the one station;

indexes "100-103", each of which indicates a MRU comprising two 996-tone RUs and one

484-tone RU allocated to the one station;

index "104", which indicates a MRU comprising three 996-tone RUs allocated to the one station;

indexes "105-106", each of which indicates a MRU comprising three 996-tone RUs and one 484-tone RU allocated to the one station;

indexes "107-127", each of which reserved.

27. The communication apparatus according to any one of claims 15 to 26, wherein the resource unit indication comprises an index, an MRU indicated by the resource unit indication corresponds to one or more indexes, and a correspondence between the MRU and a quantity of indexes is one or more of the following:

An MRU comprising two 996-tone RUs correspond to one index;

An MRU comprising four 996-tone RUs corresponds to one index;

An MRU comprising one 52-tone RU and one 26-tone RU corresponds to 12 indexes;

An MRU comprising one 106-tone RU and one 26-tone RU corresponds to eight indexes;

An MRU comprising one 484-tone RU and one 242-tone RU corresponds to four indexes;

An MRU comprising one 996-tone RU and one 484-tone RU corresponds to two indexes;

An MRU comprising two 996-tone RUs and one 484-tone RU corresponds to four indexes;

An MRU comprising three 996-tone RUs and one 484-tone RU corresponds to two indexes;

An MRU comprising three 996-tone RUs corresponds to one index;

An MRU comprising one 996-tone RU, one 484-tone RU, and one 242-tone RU correspond to four indexes.

28. The communication apparatus according to any one of claims 15 to 27, wherein the frequency band range indication and the resource unit indication are used to indicate a size and a location of the MRU.

29. A resource unit indication method, wherein the method comprises:

receiving, by a station, a trigger frame from an access point, wherein

the trigger frame comprises a resource unit allocation subfield used to indicate to allocate a resource to the station, the resource unit allocation subfield comprises a frequency band range indication and a resource unit indication, the resource unit indication is used to indicate a multi-resource unit (MRU) allocated to the station, and the frequency band range indication is used to

indicate a frequency band range, in a bandwidth, other than the MRU indicated by the resource unit indication are located; and

determining, by the station, the allocated MRU based on the frequency band range indication and the resource unit indication.

30. A resource unit indication method, wherein the method comprises:

determining, by an access point, a trigger frame, wherein

the trigger frame comprises a resource unit allocation subfield used to indicate to allocate a resource to a station, the resource unit allocation subfield comprises a frequency band range indication and a resource unit indication, the resource unit indication is used to indicate a multi-resource unit (MRU) allocated to the station, and the frequency band range indication is used to indicate a frequency band range, in a bandwidth, other than the MRU indicated by the resource unit indication are located; and

sending, by the access point, the trigger frame.

31. The method according to claim 29 or 30, wherein the frequency band range indicated by the frequency band range indication is 80 MHz in the bandwidth, and the RU/MRU indicated by the resource unit indication is from a frequency band range other than the 80 MHz indicated by the frequency band range indication.

32. The method according to claim 31, wherein

if the frequency band range indicated by the frequency band range indication is first 80 MHz in 320 MHz, the MRU indicated by the resource unit indication is from second 80 MHz to fourth 80 MHz other than the first 80 MHz in the 320 MHz.

33. The method according to claim 32, wherein when the MRU indicated by the resource unit indication is a 3*996-tone RU, a 3*996-tone RU corresponding to the second 80 MHz to the fourth 80 MHz is the MRU allocated to the station.

34. The method according to any one of claims 29 to 33, wherein the frequency band range indicated by the frequency band range indication is a frequency band range that is not related to the MRU indicated by the resource unit indication.

35. The method according to any one of claims 29 to 33, wherein

indexes of MRUs of a same size in ascending order correspond to start frequencies, in ascending order, of punctured RUs in a bandwidth in which the MRUs are located.

36. The method according to any one of claims 29 to 35, wherein the resource unit allocation

subfield comprises 9 bits, the frequency band range indication comprises 2 bits, and the resource unit indication comprises 7 bits.

37. The method according to any one of claims 29 to 36, wherein the resource unit indication comprises one index, and the index is "104", which indicates a MRU comprising three 996-tone RUs allocated to the one station.

38. The method according to any one of claims 29 to 37, wherein the frequency band range indication and the resource unit indication are used to indicate a size and a location of the MRU.

39. A resource unit indication method, wherein the method comprises:

receiving, by a station, a trigger frame from an access point, wherein

the trigger frame comprises a resource unit allocation subfield used to indicate to allocate a resource to the station, and the resource unit allocation subfield comprises a frequency band range indication and a resource unit indication; and

when a frequency band range occupied by an RU/MRU is less than or equal to 80 MHz, a granularity of a frequency band range indicated by the frequency band range indication is 80 MHz; or when a frequency band range occupied by an RU/MRU is greater than 80 MHz and less than or equal to 160 MHz, a granularity of a frequency band range indicated by the frequency band range indication is 160 MHz; and

determining, by the station, the allocated RU/MRU based on the frequency band range indication and the resource unit indication.

40. A resource unit indication method, wherein the method comprises:

determining, by an access point, a trigger frame, wherein

the trigger frame comprises a resource unit allocation subfield used to indicate to allocate a resource to a station, and the resource unit allocation subfield comprises a frequency band range indication and a resource unit indication; and

when a frequency band range occupied by an RU/MRU is less than or equal to 80 MHz, a granularity of a frequency band range indicated by the frequency band range indication is 80 MHz; or when a frequency band range occupied by an RU/MRU is greater than 80 MHz and less than or equal to 160 MHz, a granularity of a frequency band range indicated by the frequency band range indication is 160 MHz; and

sending, by the access point, the trigger frame.

41. The method according to claim 39 or 40, wherein the frequency band range indication

comprises 2 bits B0 and B1; and

when the granularity of the frequency band range indicated by the frequency band range indication is 160 MHz, 0 or 1 in B0 indicates highest 160 MHz or lowest 160 MHz, and B1 is reserved.

42. The method according to any one of claims 39 to 41, wherein

indexes of RUs/MRUs of a same size in ascending order correspond to start frequencies of the RUs/MRUs in ascending order; or

indexes of RUs/MRUs of a same size in ascending order correspond to start frequencies, in ascending order, of punctured RUs in a bandwidth in which the RUs/MRUs are located.

43. A communication apparatus, comprising:

a communication unit, configured to receive a trigger frame, wherein

the trigger frame comprises a resource unit allocation subfield used to indicate to allocate a resource to a station, the resource unit allocation subfield comprises a frequency band range indication and a resource unit indication, the resource unit indication is used to indicate a multi-resource unit (MRU) allocated to the station, and the frequency band range indication is used to indicate a frequency band range, in a bandwidth, other than the MRU indicated by the resource unit indication are located; and

a processing unit, configured to determine the allocated MRU based on the frequency band range indication and the resource unit indication.

44. A communication apparatus, comprising:

a processing unit, configured to determine a trigger frame, wherein

the trigger frame comprises a resource unit allocation subfield used to indicate to allocate a resource to a station, the resource unit allocation subfield comprises a frequency band range indication and a resource unit indication, the resource unit indication is used to indicate a multi-resource unit (MRU) allocated to the station, and the frequency band range indication is used to indicate a frequency band range, in a bandwidth, other than the MRU indicated by the resource unit indication are located; and

a communication unit, configured to send the trigger frame.

45. The communication apparatus according to claim 43 or 44, wherein the frequency band range indicated by the frequency band range indication is 80 MHz in the bandwidth, and the MRU indicated by the resource unit indication is from a frequency band range other than the 80 MHz

indicated by the frequency band range indication.

46. The communication apparatus according to claim 45, wherein

if the frequency band range indicated by the frequency band range indication is first 80 MHz in 320 MHz, the MRU indicated by the resource unit indication is from second 80 MHz to fourth 80 MHz other than the first 80 MHz in the 320 MHz.

47. The communication apparatus according to claim 46, wherein when the MRU indicated by the resource unit indication is a 3*996-tone RU, a 3*996-tone RU corresponding to the second 80 MHz to the fourth 80 MHz is the MRU allocated to the station.

48. The communication apparatus according to any one of claims 43 to 47, wherein the frequency band range indicated by the frequency band range indication is a frequency band range that is not related to the MRU indicated by the resource unit indication.

49. The station according to any one of claims 43 to 48, wherein

indexes of MRUs of a same size in ascending order correspond to start frequencies, in ascending order, of punctured RUs in a bandwidth in which the MRUs are located.

50. The communication apparatus according to any one of claims 43 to 49, wherein the resource unit allocation subfield comprises 9 bits, the frequency band range indication comprises 2 bits, and the resource unit indication comprises 7 bits.

51. The communication apparatus according to any one of claims 43 to 50, wherein the resource unit indication comprises one index, and the index is "104", which indicates a MRU comprising three 996-tone RUs allocated to the one station.

52. The communication apparatus according to any one of claims 43 to 51, wherein the frequency band range indication and the resource unit indication are used to indicate a size and a location of the MRU.

53. A communication apparatus, comprising:

a communication unit, configured to receive a trigger frame from an access point, wherein

the trigger frame comprises a resource unit allocation subfield used to indicate to allocate a resource to the station, and the resource unit allocation subfield comprises a frequency band range indication and a resource unit indication; and

when a frequency band range occupied by an RU/MRU is less than or equal to 80 MHz, a granularity of a frequency band range indicated by the frequency band range indication is 80 MHz; or when a frequency band range occupied by an RU/MRU is greater than 80 MHz and less than or

equal to 160 MHz, a granularity of a frequency band range indicated by the frequency band range indication is 160 MHz; and

a processing unit, configured to determine the allocated RU/MRU based on the frequency band range indication and the resource unit indication.

54. A communication apparatus, comprising:

a processing unit, configured to determine a trigger frame, wherein

the trigger frame comprises a resource unit allocation subfield used to indicate to allocate a resource to a station, and the resource unit allocation subfield comprises a frequency band range indication and a resource unit indication; and

when a frequency band range occupied by an RU/MRU is less than or equal to 80 MHz, a granularity of a frequency band range indicated by the frequency band range indication is 80 MHz; or when a frequency band range occupied by an RU/MRU is greater than 80 MHz and less than or equal to 160 MHz, a granularity of a frequency band range indicated by the frequency band range indication is 160 MHz; and

a communication unit, configured to send the trigger frame.

55. The communication apparatus according to claim 53 or 54, wherein the frequency band range indication comprises 2 bits B0 and B1; and

when the granularity of the frequency band range indicated by the frequency band range indication is 160 MHz, 0 or 1 in B0 indicates highest 160 MHz or lowest 160 MHz, and B1 is reserved.

56. The communication apparatus according to claim 53 to 55, wherein

indexes of RUs/MRUs of a same size in ascending order correspond to start frequencies of the RUs/MRUs in ascending order; or

indexes of RUs/MRUs of a same size in ascending order correspond to start frequencies, in ascending order, of punctured RUs in a bandwidth in which the RUs/MRUs are located.

57. A computer-readable storage medium, wherein the computer-readable storage medium is configured to store instructions, and when the instructions are executed, the method according to any one of claims 1 to 14 is implemented, or any one of claims 29 to 38 is implemented, or the method according to any one of claims 39 to 42 is implemented.

58. A chip, comprising at least one processor and an interface, wherein the interface is configured to obtain a computer program, and the processor is configured to invoke the computer

program to perform the method according to any one of claims 1 to 14, or any one of claims 29 to 38, or the method according to any one of claims 39 to 42.

59. A communication apparatus, comprising:

a processor and a memory, wherein the memory is configured to store instructions or a computer program, and the processor is configured to execute the computer program or the instructions stored in the memory, so that the communication apparatus performs the method according to any one of claims 1 to 14, or any one of claims 29 to 38, or any one of claims 39 to 42.