

CLAIMS

1. A resource allocation method, comprising:

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

the trigger frame comprises one user information field comprising an association identifier

5 that is same as an association identifier of the station, and the one user information field indicates a plurality of resource units allocated to the station; and

determining, by the station, the plurality of allocated resource units based on the trigger frame.

2. The method according to claim 1, wherein the determining, by the station, the plurality of allocated resource units based on the trigger frame comprises:

10 selecting, by the station from the trigger frame, one user information field that are the same as the association identifier of the station; and

for the selected one user information field, determining, by the station, more than one resource units indicated by the user information field, wherein

15 the more than one resource units indicated by the selected one user information field are the plurality of resource units allocated to the station.

3. The method according to claim 2, wherein the user information field comprises a frequency band range indication and a resource unit indication, the frequency band range indication indicates an 80 MHz frequency band range in a bandwidth, and the resource unit indication indicates more
20 than one resource units; and

the determining, by the station, more than one resource units indicated by the user information field comprises:

determining, by the station based on the frequency band range indicated by the frequency band range indication, the more than one resource units indicated by the resource unit indication.

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4. The method according to claim 3, wherein the frequency band range indicated by the frequency band range indication is any one of the following:

a primary 80 MHz frequency band range, a secondary 80 MHz frequency band range, a third 80 MHz frequency band range, and a fourth 80 MHz frequency band range.

5. The method according to claim 3, wherein the plurality of resource units indicated by the resource unit indication are a plurality of resource units corresponding to any one of the following combinations:

a combination of a fourth resource unit at a lowest frequency in one 20 MHz frequency band range in the 80 MHz frequency band range and a fifth resource unit in a center of the 20 MHz frequency band range;

a combination of a fourth resource unit at a highest frequency in one 20 MHz frequency band range in the 80 MHz frequency band range and a fifth resource unit in a center of the 20 MHz frequency band range;

wherein the fifth resource unit is a resource unit comprising 26 subcarriers, the fourth resource unit is a resource unit comprising 106 subcarriers.

6. The method according to claim 3, wherein the plurality of resource units indicated by the resource unit indication are a plurality of resource units corresponding to any one of the following combinations:

a combination of a sixth resource unit at a second lowest frequency in one 20 MHz frequency band range in the 80 MHz frequency band range and a fifth resource unit in the 20 MHz frequency band range, wherein the fifth resource unit is on a same side as the sixth resource unit and is adjacent to the sixth resource unit;

a combination of a sixth resource unit at a second lowest frequency in one 20 MHz frequency band range in the 80 MHz frequency band range and a fifth resource unit in a center of the 20 MHz frequency band range;

a combination of a sixth resource unit at a second highest frequency in one 20 MHz frequency band range in the 80 MHz frequency band range and a fifth resource unit in the 20 MHz frequency band range, wherein the fifth resource unit is on a same side as the sixth resource unit and is adjacent to the sixth resource unit;

a combination of a sixth resource unit at a second highest frequency in one 20 MHz frequency band range in the 80 MHz frequency band range and a fifth resource unit in a center of the 20 MHz frequency band range;

wherein the sixth resource unit is a resource unit comprising 52 subcarriers, the fifth resource unit is a resource unit comprising 26 subcarriers.

7. The method according to claim 3, wherein the plurality of resource units indicated by the

resource unit indication are a plurality of resource units corresponding to any one of the following combinations:

a combination of a second resource unit and a third resource unit in the 80 MHz frequency band range, wherein the third resource unit is adjacent to the second resource unit;

5 a combination of a second resource unit and a third resource unit in the 80 MHz frequency band range, wherein the third resource unit is not adjacent to the second resource unit;

wherein the third resource unit is a resource unit comprising 242 subcarriers, the second resource unit is a resource unit comprising 484 subcarriers.

10 8. The method according to claim 3, wherein the plurality of resource units indicated by the resource unit indication are a plurality of resource units corresponding to any one of the following combinations:

a combination of a first resource unit corresponding to the 80 MHz frequency band range and a second resource unit that is in a lower-frequency 80 MHz frequency band range and that is not
15 adjacent to the first resource unit, wherein the 80 MHz frequency band range indicated by the frequency band range indication is adjacent to the lower-frequency 80 MHz frequency band range;

a combination of a first resource unit corresponding to the 80 MHz frequency band range and a second resource unit that is in a higher-frequency 80 MHz frequency band range and that is not
adjacent to the first resource unit, wherein the 80 MHz frequency band range indicated by the
20 frequency band range indication is adjacent to the higher-frequency 80 MHz frequency band range;

wherein the first resource unit is a resource unit comprising 996 subcarriers, the second resource unit is a resource unit comprising 484 subcarriers.

9. The method according to claim 3, wherein the plurality of resource units indicated by the resource unit indication are a plurality of resource units corresponding to any one of the following
25 combinations:

a combination of a first resource unit corresponding to the 80 MHz frequency band range and a second resource unit and a third resource unit that are in a lower-frequency 80 MHz frequency band range and that are adjacent to the first resource unit, wherein the 80 MHz frequency band range indicated by the frequency band range indication is adjacent to the lower-frequency 80 MHz
30 frequency band range;

a combination of a first resource unit corresponding to the 80 MHz frequency band range and

a second resource unit and a third resource unit that are in a higher-frequency 80 MHz frequency band range and that are adjacent to the first resource unit, wherein the 80 MHz frequency band range indicated by the frequency band range indication is adjacent to the higher-frequency 80 MHz frequency band range;

5 wherein the third resource unit is a resource unit comprising 242 subcarriers, the second resource unit is a resource unit comprising 484 subcarriers, and the first resource unit is a resource unit comprising 996 subcarriers.

10 10. The method according to claim 3, wherein the plurality of resource units indicated by the resource unit indication are a plurality of resource units corresponding to any one of the following combinations:

 a combination of two first resource units at a lowest frequency and one first resource unit at a highest frequency in a 320 MHz frequency band range;

 a combination of one first resource unit at a lowest frequency and two first resource units at a highest frequency in a 320 MHz frequency band range;

15 a combination of three first resource units at a lowest frequency in a 320 MHz frequency band range;

 a combination of three first resource units at a highest frequency in a 320 MHz frequency band range;

 wherein the first resource unit is a resource unit comprising 996 subcarriers.

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11. A resource allocation method, comprising:

 determining, by an access point, a plurality of resource units allocated to a station; and

 sending, by the access point, a trigger frame to the station, wherein the trigger frame comprises one user information field comprising an association identifier that is the same as an association identifier of the station, and the one user information field indicates the plurality of resource units allocated to the station.

25 12. The method according to claim 11, wherein

 the user information field comprises a frequency band range indication and a resource unit indication, the frequency band range indication indicates an 80 MHz frequency band range in a bandwidth, and the resource unit indication indicates one or more resource units allocated to the station.

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13. The method according to claim 12, wherein the frequency band range indicated by the frequency band range indication is any one of the following:

a primary 80 MHz frequency band range, a secondary 80 MHz frequency band range, a third 80 MHz frequency band range, and a fourth 80 MHz frequency band range.

5 14. The method according to claim 12, wherein the plurality of resource units indicated by the resource unit indication are a plurality of resource units corresponding to any one of the following combinations:

a combination of a fourth resource unit at a lowest frequency in one 20 MHz frequency band range in the 80 MHz frequency band range and a fifth resource unit in a center of the 20 MHz
10 frequency band range;

a combination of a fourth resource unit at a highest frequency in one 20 MHz frequency band range in the 80 MHz frequency band range and a fifth resource unit in a center of the 20 MHz frequency band range;

wherein the fifth resource unit is a resource unit comprising 26 subcarriers, the fourth resource
15 unit is a resource unit comprising 106 subcarriers.

15. The method according to claim 12, wherein the plurality of resource units indicated by the resource unit indication are a plurality of resource units corresponding to any one of the following combinations:

a combination of a sixth resource unit at a second lowest frequency in one 20 MHz frequency
20 band range in the 80 MHz frequency band range and a fifth resource unit in the 20 MHz frequency band range, wherein the fifth resource unit is on a same side as the sixth resource unit and is adjacent to the sixth resource unit;

a combination of a sixth resource unit at a second lowest frequency in one 20 MHz frequency band range in the 80 MHz frequency band and a fifth resource unit in a center of the 20 MHz
25 frequency band range;

a combination of a sixth resource unit at a second highest frequency in one 20 MHz frequency band range in the 80 MHz frequency band and a fifth resource unit in the 20 MHz frequency band range, wherein the fifth resource unit is on a same side as the sixth resource unit and is adjacent to the sixth resource unit;

30 a combination of a sixth resource unit at a second highest frequency in one 20 MHz frequency band range in the 80 MHz frequency band and a fifth resource unit in a center of the 20 MHz

frequency band range;

wherein the sixth resource unit is a resource unit comprising 52 subcarriers, the fifth resource unit is a resource unit comprising 26 subcarriers.

16. The method according to claim 12, wherein the plurality of resource units indicated by the resource unit indication are a plurality of resource units corresponding to any one of the following combinations:

a combination of a second resource unit and a third resource unit in the 80 MHz frequency band range, wherein the third resource unit is adjacent to the second resource unit;

a combination of a second resource unit and a third resource unit in the 80 MHz frequency band range, wherein the third resource unit is not adjacent to the second resource unit;

wherein the third resource unit is a resource unit comprising 242 subcarriers, the second resource unit is a resource unit comprising 484 subcarriers.

17. The method according to claim 12, wherein the plurality of resource units indicated by the resource unit indication are a plurality of resource units corresponding to any one of the following combinations:

a combination of a first resource unit corresponding to the 80 MHz frequency band range and a second resource unit that is in a lower-frequency 80 MHz frequency band range and that is not adjacent to the first resource unit, wherein the 80 MHz frequency band range indicated by the frequency band range indication is adjacent to the lower-frequency 80 MHz frequency band range;

a combination of a first resource unit corresponding to the 80 MHz frequency band range and a second resource unit that is in a higher-frequency 80 MHz frequency band range and that is not adjacent to the first resource unit, wherein the 80 MHz frequency band range indicated by the frequency band range indication is adjacent to the higher-frequency 80 MHz frequency band range;

wherein the first resource unit is a resource unit comprising 996 subcarriers, the second resource unit is a resource unit comprising 484 subcarriers.

18. The method according to claim 12, wherein the plurality of resource units indicated by the resource unit indication are a plurality of resource units corresponding to any one of the following combinations:

a combination of a first resource unit corresponding to the 80 MHz frequency band range and a second resource unit and a third resource unit that are in a lower-frequency 80 MHz frequency band range and that are adjacent to the first resource unit, wherein the 80 MHz frequency band

range indicated by the frequency band range indication is adjacent to the lower-frequency 80 MHz frequency band range;

a combination of a first resource unit corresponding to the 80 MHz frequency band range and a second resource unit and a third resource unit that are in a higher-frequency 80 MHz frequency band range and that are adjacent to the first resource unit, wherein the 80 MHz frequency band range indicated by the frequency band range indication is adjacent to the higher-frequency 80 MHz frequency band range;

wherein the third resource unit is a resource unit comprising 242 subcarriers, the second resource unit is a resource unit comprising 484 subcarriers, and the first resource unit is a resource unit comprising 996 subcarriers.

19. The method according to claim 12, wherein the plurality of resource units indicated by the resource unit indication are a plurality of resource units corresponding to any one of the following combinations:

a combination of two first resource units at a lowest frequency and one first resource unit at a highest frequency in a 320 MHz frequency band range;

a combination of one first resource unit at a lowest frequency and two first resource units at a highest frequency in a 320 MHz frequency band range;

a combination of three first resource units at a lowest frequency in a 320 MHz frequency band range;

a combination of three first resource units at a highest frequency in a 320 MHz frequency band range;

wherein the first resource unit is a resource unit comprising 996 subcarriers.

20. A communication apparatus, comprising a processor, a memory, and a transceiver, wherein

the transceiver is configured to receive a trigger frame;

the memory is configured to store program code; and

the processor is configured to invoke the program code from the memory, to cause the communication apparatus to perform the method in any one of claims 1 to 10.

21. An access point, comprising a processor, a memory, and a transceiver, wherein

the transceiver is configured to send a trigger frame;

the memory is configured to store program code; and

the processor is configured to invoke the program code from the memory, to cause the access point to perform the method in any one of claims 11 to 19.

22. A computer-readable storage medium, wherein the computer-readable storage medium is
5 configured to store instructions, and when the instructions are executed by a processor, a station comprising the processor is cause to perform the method in to any one of claims 1 to 10.

23. A computer-readable storage medium, wherein the computer-readable storage medium is configured to store instructions, and when the instructions are executed by a processor, an access point comprising the processor is cause to perform the method in any one of claims 11 to 19.

10 24. A chip system, comprising:

at least one processor; and

a computer-readable storage medium, wherein the storage medium stores instructions, and wherein the instructions, when executed by the at least one processor, cause a communication apparatus comprising the chip system to perform the method in to any one of claims 1 to 10.

15 25. A chip system, comprising:

at least one processor; and

a computer-readable storage medium, wherein the storage medium stores instructions, and wherein the instructions, when executed by the at least one processor, cause an access point comprising the chip system to perform the method in to any one of claims 11 to 19.

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