CLAIMS

What is claimed is:

1. A method for selecting an uplink transmission resource, applied to a terminal and comprising:

selecting at least two PUSCH resources on M carriers for uplink transmission if a priority of at least one PUSCH resource on the M carriers is higher than or equal to priorities of PUCCH resources on N carriers; otherwise, selecting at least one PUCCH resource on the N carriers for uplink transmission; wherein

each of the PUSCH resources on the M carriers collides with each PUCCH resources on the N carriers, the M carriers and the N carriers belong to a same cell group, M and N are natural numbers, M is greater than 1, and N is greater than or equal to 1.

2. The method according to claim 1, wherein the selecting at least two PUSCH resources on M carriers for uplink transmission if a priority of at least one PUSCH resource on the M carriers is higher than or equal to priorities of PUCCH resources on N carriers comprises:

selecting at least two PUSCH resources on the M carriers for uplink transmission if at least one PUSCH resource on the M carriers has a highest priority among the PUSCH resources on the M carriers and the PUCCH resources on the N carriers.

3. The method according to claim 2, wherein the selecting at least two PUSCH resources on the M carriers for uplink transmission if at least one PUSCH resource on the M carriers has a highest priority among the PUSCH resources on the M carriers and the PUCCH resources on the N carriers comprises:

selecting at least two PUSCH resources on the M carriers for uplink transmission if a priority of a first PUSCH resource is higher than or equal to the priorities of the PUCCH resources on the N carriers; otherwise, selecting at least one PUCCH resource on the N carriers for uplink transmission; wherein

the first PUSCH resource is a PUSCH resource with a highest priority in the PUSCH resources on the M carriers, and N=1.

4. The method according to claim 2, wherein the selecting at least two PUSCH resources on the M carriers for uplink transmission if at least one PUSCH resource on the M carriers has a highest priority among the PUSCH resources on the M carriers and the PUCCH resources on the N carriers comprises:

selecting at least two PUSCH resources on the M carriers for uplink transmission if a priority of a first PUSCH resource is higher than or equal to a priority of a first PUCCH resource; otherwise, selecting at least one PUCCH resource on the N carriers for uplink transmission; wherein

the first PUSCH resource is a PUSCH resource with a highest priority in the PUSCH resources on the M carriers, the first PUCCH resource is a PUCCH resource with a highest priority in the PUCCH resources on the N carriers, and N is greater than 1.

5. The method according to any one of claims 1 to 4, further comprising:

skipping performing, by the terminal, uplink transmission on PUSCH resources that conflict with the PUCCH resources on the N carriers; or

selecting, by the terminal, a PUSCH resource on a carrier other than a first carrier for uplink transmission if the terminal selects a PUCCH resource on the first carrier for uplink transmission.

6. The method according to any one of claims 1 to 5, wherein the selecting at least one PUCCH resource on the N carriers for uplink transmission comprises any one of the following:

selecting a PUCCH resource with the highest priority from the PUCCH resources on the N carriers for uplink transmission; and

selecting one PUCCH resource from PUCCH resources on O carriers of the N carriers for uplink transmission, wherein priorities of the PUCCH resources on the O carriers are all higher than the priorities of the PUSCH resources, O is greater than or equal to 1, and O is less than or equal to N.

7. The method according to any one of claims 1 to 6, wherein the selecting at least two PUSCH resources on the M carriers for uplink transmission comprises:

using the PUSCH resources on the M carriers for uplink transmission, wherein no more than one PUSCH resource is available on each of the M carriers;

selecting at least two PUSCH resources from the PUSCH resources on the M carriers for uplink transmission, wherein the at least two PUSCH resources are mapped with data to be transmitted ; or

selecting at least one PUSCH resource having a lower priority than the PUCCH resource from the PUSCH resources on the M carriers, for data transmission.

8. The method according to claim 1, wherein the at least two PUSCH resources comprise a PUSCH resource with a priority lower than the priority of the PUCCH resource.

9. The method according to claim 1, wherein if a plurality of PUSCH resources on one cell partially overlap in time, one PUSCH resource on the cell is selected for uplink transmission.

10. The method according to any one of claims 1 to 7, wherein the PUCCH resource is used to carry a scheduling request SR, and the priority of the PUCCH resource is determined according to a priority of a medium access control control element MAC CE that has triggered the SR, wherein the priority of the MAC CE is defined in a protocol or configured by a network side.

11. A terminal, comprising:

a selecting module, configured to select at least two PUSCH resources on M carriers for uplink transmission if a priority of at least one PUSCH resource on the M carriers is higher than or equal to priorities of PUCCH resources on N carriers; otherwise, select at least one PUCCH resource on the N carriers for uplink transmission; wherein

each of the PUSCH resources on the M carriers collides with each PUCCH resources on the N carriers, the M carriers and the N carriers belong to a same cell group, M and N are natural numbers, M is greater than 1, and N is greater than or equal to 1.

12. The terminal according to claim 11, wherein the selecting module is further configured to:

select at least two PUSCH resources on the M carriers for uplink transmission if at least one PUSCH resource on the M carriers has a highest priority among the PUSCH resources on the M carriers and the PUCCH resources on the N carriers.

13. The terminal according to claim 12, wherein the selecting module is further configured to:

select at least two PUSCH resources on the M carriers for uplink transmission if a priority of a first PUSCH resource is higher than or equal to the priorities of the PUCCH resources on the N carriers; otherwise, select at least one PUCCH resource on the N carriers for uplink transmission; wherein

the first PUSCH resource is a PUSCH resource with a highest priority in the PUSCH resources on the M carriers, and N=1.

14. The terminal according to claim 12, wherein the selecting module is further configured to:

select at least two PUSCH resources on the M carriers for uplink transmission if a priority of a first PUSCH resource is higher than or equal to a priority of a first PUCCH resource; otherwise, select at least one PUCCH resource on the N carriers for uplink transmission; wherein

the first PUSCH resource is a PUSCH resource with a highest priority in the PUSCH resources on the M carriers, the first PUCCH resource is a PUCCH resource with a highest priority in the PUCCH resources on the N carriers, and N is greater than 1.

15. The terminal according to any one of claims 11 to 14, wherein the selecting module is further configured to:

skip performing uplink transmission on PUSCH resources that conflict with the PUCCH resources on the N carriers; or

select a PUSCH resource on a carrier other than a first carrier for uplink transmission if the terminal selects a PUCCH resource on the first carrier for uplink transmission.

16. The terminal according to any one of claims 11 to 15, wherein the selecting module is further configured to select at least one PUCCH resource on the N carriers for uplink transmission, comprising any one of the following:

selecting a PUCCH resource with the highest priority from the PUCCH resources on the N carriers for uplink transmission; and

selecting one PUCCH resource from PUCCH resources on O carriers of the N carriers for uplink transmission, wherein priorities of the PUCCH resources on the O carriers are all higher than the priorities of the PUSCH resources, O is greater than or equal to 1, and O is less than or equal to N.

17. The terminal according to any one of claims 11 to 16, wherein the selecting module is further configured to selecting at least two PUSCH resources on the M carriers for uplink transmission, comprising:

using the PUSCH resources on the M carriers for uplink transmission, wherein no more than one PUSCH resource is available on each of the M carriers;

selecting at least two PUSCH resources from the PUSCH resources on the M carriers for uplink transmission, wherein the at least two PUSCH resources are mapped with data to be transmitted; or

selecting at least one PUSCH resource having a lower priority than the PUCCH resource from the PUSCH resources on the M carriers, for data transmission.

18. The terminal according to claim 11, wherein the at least two PUSCH resources are allowed to comprise a PUSCH resource with a priority lower than the priority of the PUCCH resource.

19. The terminal according to claim 11, wherein if a plurality of PUSCH resources on one cell partially overlap in time, one PUSCH resource on the cell is selected for uplink transmission.

20. The terminal according to any one of claims 11 to 17, wherein the PUCCH resource is used to carry a scheduling request SR, and the priority of the PUCCH resource is determined according to a priority of a medium access control control element MAC CE that has triggered the SR, wherein the priority of the MAC CE is defined in a protocol or configured by a network side.