

WHAT IS CLAIMED IS:

1. A scheduling request transmission method, performed by a user equipment (UE), comprising:

5 sending, by the UE, a scheduling request (SR) triggered by a buffer status report (BSR) to a network device; wherein the BSR comprises: a first BSR triggered according to delay information of to-be-transmitted data.

2. The method according to claim 1, wherein the BSR further comprises:

a second BSR, wherein a triggering condition of the second BSR is different from a triggering condition of the first BSR.

10 3. The method according to claim 2, wherein the triggering condition of the first BSR comprises at least one of:

a remaining delay budget of the to-be-transmitted data being less than or equal to a first threshold; or

15 a ratio of a remaining delay budget of the to-be-transmitted data to a packet delay budget of the to-be-transmitted data being less than or equal to a second threshold.

4. The method according to claim 2 or 3, wherein the triggering condition of the second BSR comprises at least one of:

in a case that buffers of all logical channels belonging to a logical channel group are empty, the to-be-transmitted data arrival on any one of the logical channels; or

20 the to-be-transmitted data arrival on a first logical channel, and a priority of the first logical channel being higher than a priority of a second logical channel having the to-be-transmitted data.

5. The method according to any one of claims 2 to 4, wherein sending, by the UE, the SR triggered by the BSR to the network device, comprises at least one of:

25 sending, by the UE, an SR triggered by the first BSR to the network device using a first SR configuration; or,

sending, by the UE, an SR triggered by the second BSR to the network device using a second SR configuration.

30 6. The method according to claim 5, wherein the first SR configuration is any SR configuration of the UE; or

the second SR configuration is: an SR configuration corresponding to a logical channel associated with the second BSR; or

the first SR configuration is any SR configuration of the UE; and the second SR

configuration is: an SR configuration corresponding to a logical channel associated with the second BSR.

7. The method according to claim 6, wherein in a case that the SR configuration of the UE comprises an SR configuration corresponding to the triggering condition of the first BSR,
5 a usage priority of the SR configuration corresponding to the triggering condition of the first BSR is higher than a usage priority of an SR configuration corresponding to a logical channel or a logical channel group.

8. The method according to any one of claims 1 to 7, further comprising:
in response to reception of an uplink grant for the to-be-transmitted data or an uplink
10 grant for the BSR, canceling the sending of the SR, or stopping a prohibit timer associated with the SR that is canceled from being sent.

9. The method according to any one of claims 1 to 8, further comprising:
receiving indication information sent by the network device; and
determining, according to the indication information, whether to enable a function of
15 triggering the first BSR according to the delay information.

10. The method according to claim 9, wherein the indication information further comprises: a resource granularity for enabling the function.

11. The method according to claim 10, wherein the resource granularity comprises at least one of:

20 a logical channel; or
a logical channel group.

12. A scheduling request transmission method, performed by a network device, comprising:

receiving, by the network device, a scheduling request (SR) triggered by a buffer status
25 report (BSR) sent by a user equipment (UE), wherein the BSR comprises a first BSR triggered according to delay information of to-be-transmitted data.

13. The method according to claim 12, wherein the BSR further comprises:
a second BSR, wherein a triggering condition of the second BSR is different from a
triggering condition of the first BSR;

30 wherein the triggering condition of the second BSR comprises at least one of:
in a case that buffers of all logical channels belonging to a logical channel group are empty, the to-be-transmitted data arrival on any one of the logical channels; or
the to-be-transmitted data arrival on a first logical channel, and a priority of the first

logical channel being higher than a priority of a second logical channel having the to-be-transmitted data.

14. The method according to claim 13, wherein the triggering condition of the first BSR comprises at least one of:

5 a remaining delay budget of the to-be-transmitted data being less than or equal to a first threshold; or

a ratio of a remaining delay budget of the to-be-transmitted data to a packet delay budget of the to-be-transmitted data being less than or equal to a second threshold.

15. The method according to any one of claims 13 to 14, wherein receiving the SR triggered by the BSR sent by the UE comprises at least one of:

10 receiving an SR triggered by the first BSR, wherein the first BSR is sent by the UE using a first SR configuration; or

receiving an SR triggered by the second BSR, wherein the second BSR is sent by the UE using a second SR configuration.

16. The method according to claim 15, wherein the first SR configuration is any SR configuration of the UE; or

the second SR configuration is: an SR configuration corresponding to a logical channel associated with the second BSR; or

20 the first SR configuration is any SR configuration of the UE; and the second SR configuration is: an SR configuration corresponding to a logical channel associated with the second BSR;

wherein in a case that the SR configuration of the UE comprises an SR configuration corresponding to the triggering condition of the first BSR, a usage priority of the SR configuration corresponding to the triggering condition of the first BSR is higher than a usage priority of an SR configuration corresponding to a logical channel or a logical channel group.

17. The method according to any one of claims 12 to 16, further comprising:

25 sending an uplink grant for the to-be-transmitted data or an uplink grant for the BSR to the UE; wherein the uplink grant is used by the UE to cancel the sending of the SR, or to stop a prohibit timer associated with the SR that is canceled from being sent.

18. The method according to any one of claims 12 to 17, further comprising:

30 sending indication information to the UE; wherein the indication information is used by the UE to determine whether to enable a function of triggering the first BSR according to the delay information;

wherein the indication information further comprises: a resource granularity for enabling the function;

wherein the resource granularity comprises at least one of:

a logical channel; or

5 a logical channel group.

19. A communication system, comprising:

a user equipment UE, configured to perform the scheduling request transmission method according to any one of claims 1 to 11; and

10 a network device, configured to perform the scheduling request transmission method according to any one of claims 12 to 18.

20. A communication device, comprising a processor, a memory, and an executable program stored in the memory and executable by the processor, wherein the processor executes the executable program to perform the scheduling request transmission method according to any one of claims 1 to 11 or any one of claims 12 to 18.

15