

CLAIMS

What is claimed is:

1. A method for data transmission, applied to a terminal device and comprising:

in a case that a first data packet has been generated based on a first uplink grant
5 and uplink transmission corresponding to the first uplink grant is given up,
determining, according to a selection rule, a second uplink grant for transmitting the
first data packet;

wherein the selection rule comprises determining a target uplink grant located
after the first uplink grant in time domain as the second uplink grant;

10 wherein a type of the first uplink grant is a configured uplink grant, the target
uplink grant is a configured uplink grant, the target uplink grant corresponds to
second configuration information, a time interval between the target uplink grant and
the first uplink grant or between the target uplink grant and a time point of
determining use of the target uplink grant is greater than or equal to target duration,
15 another time interval between the first uplink grant and another uplink grant, located
before the target uplink grant in time domain, in uplink grants corresponding to the
second configuration information is less than the target duration, and the target
duration is minimum duration required for reconstructing a data packet by the
terminal device; wherein the second configuration information comprises at least one
20 piece of uplink grant configuration information.

2. The method according to claim 1, wherein the target uplink grant is an uplink
grant with a smallest time interval from the first uplink grant in all uplink grants of
the terminal device.

3. The method according to claim 1, wherein the first uplink grant and the
25 second uplink grant correspond to a same hybrid automatic repeat request HARQ
process index; or

the first uplink grant and the second uplink grant correspond to different HARQ
process indexes.

4. The method according to claim 1 or 2, wherein a transport block size TBS for the second uplink grant is greater than or equal to a TBS for the first uplink grant.

5. The method according to claim 1 or 2, wherein the method further comprises:
after a second data packet is generated based on the second uplink grant,
5 clearing the first data packet, or continuing to store the first data packet, wherein the second data packet comprises data of the first data packet.

6. The method according to claim 1 or 2, wherein the method further comprises:
if retransmission indication information has not been received before the first
data packet is transmitted by using the second uplink grant, transmitting the first data
10 packet by using the second uplink grant; wherein

the retransmission indication information indicates that the terminal device transmits the first data packet by using a third uplink grant.

7. The method according to claim 6, wherein the method further comprises:
if the retransmission indication information has been received before the first
15 data packet is transmitted by using the second uplink grant, transmitting the first data packet in a target manner; wherein

the target manner comprises one of the following manners:

giving up transmitting the first data packet by using the second uplink grant,
and transmitting the first data packet by using the third uplink grant;

20 giving up transmitting the first data packet by using the third uplink grant, and transmitting the first data packet by using the second uplink grant;

transmitting the first data packet by using one uplink grant, with a smaller time interval from the first uplink grant, in the second uplink grant and the third uplink grant;

25 transmitting the first data packet by using one uplink grant with higher transmission reliability in the second uplink grant and the third uplink grant;

transmitting the first data packet by using one uplink grant with a larger TBS in the second uplink grant and the third uplink grant;

30 transmitting the first data packet by using one uplink grant, occupying fewer transmission resources, in the second uplink grant and the third uplink grant; and

transmitting the first data packet by using the second uplink grant and the third uplink grant.

8. A method for data reception, applied to a network device and comprising:

if retransmission indication information has not been transmitted to a terminal
5 device before a first data packet is received by using a second uplink grant, receiving the first data packet by using the second uplink grant; wherein

the retransmission indication information indicates that the terminal device transmits the first data packet by using a third uplink grant, and the second uplink grant is determined according to a selection rule in a case that the terminal device
10 has generated the first data packet based on a first uplink grant and given up uplink transmission corresponding to the first uplink grant;

wherein the selection rule comprises determining a target uplink grant located after the first uplink grant in time domain as the second uplink grant;

wherein a type of the first uplink grant is a configured uplink grant, the target
15 uplink grant is a configured uplink grant, the target uplink grant corresponds to second configuration information, a time interval between the target uplink grant and the first uplink grant or between the target uplink grant and a time point of determining use of the target uplink grant is greater than or equal to target duration, another time interval between the first uplink grant and another uplink grant, located
20 before the target uplink grant in time domain, in uplink grants corresponding to the second configuration information is less than the target duration, and the target duration is minimum duration required for reconstructing a data packet by the terminal device; wherein the second configuration information comprises at least one piece of uplink grant configuration information.

25 9. The method according to claim 8, wherein the target uplink grant is an uplink grant with a smallest time interval from the first uplink grant in all uplink grants of the terminal device.

10. The method according to claim 8 or 9, wherein the first uplink grant and the second uplink grant correspond to a same hybrid automatic repeat request HARQ
30 process index; or

the first uplink grant and the second uplink grant correspond to different HARQ process indexes.

11. The method according to claim 8 or 9, wherein a transport block size TBS for the second uplink grant is greater than or equal to a TBS for the first uplink grant.

5 12. The method according to claim 8 or 9, wherein the method further comprises:

if the retransmission indication information has been transmitted to the terminal device before the first data packet is received by using the second uplink grant, receiving the first data packet in a target manner; wherein

10 the target manner comprises one of the following manners:

giving up receiving the first data packet by using the second uplink grant, and receiving the first data packet by using the third uplink grant;

giving up receiving the first data packet by using the third uplink grant, and receiving the first data packet by using the second uplink grant;

15 receiving the first data packet by using one uplink grant, with a smaller time interval from the first uplink grant, in the second uplink grant and the third uplink grant;

receiving the first data packet by using one uplink grant with higher transmission reliability in the second uplink grant and the third uplink grant;

20 receiving the first data packet by using one uplink grant with a larger TBS in the second uplink grant and the third uplink grant;

receiving the first data packet by using one uplink grant, occupying fewer transmission resources, in the second uplink grant and the third uplink grant; and

25 receiving the first data packet by using the second uplink grant and the third uplink grant.

13. A terminal device, comprising:

a processing module, configured to: in a case that a first data packet has been generated based on a first uplink grant and uplink transmission corresponding to the first uplink grant is given up, determine, according to a selection rule, a second
30 uplink grant for transmitting the first data packet;

wherein the selection rule comprises determining a target uplink grant located after the first uplink grant in time domain as the second uplink grant;

wherein a type of the first uplink grant is a configured uplink grant, the target uplink grant is a configured uplink grant, the target uplink grant corresponds to second configuration information, a time interval between the target uplink grant and the first uplink grant or between the target uplink grant and a time point of determining use of the target uplink grant is greater than or equal to target duration, another time interval between the first uplink grant and another uplink grant, located before the target uplink grant in time domain, in uplink grants corresponding to the second configuration information is less than the target duration, and the target duration is minimum duration required for reconstructing a data packet by the terminal device; wherein the second configuration information comprises at least one piece of uplink grant configuration information.

14. A network device, comprising:

a processing module, configured to: if retransmission indication information has not been transmitted to a terminal device before a first data packet is received by using a second uplink grant, receive the first data packet by using the second uplink grant; wherein

the retransmission indication information indicates that the terminal device transmits the first data packet by using a third uplink grant, and the second uplink grant is determined according to a selection rule in a case that the terminal device has generated the first data packet based on a first uplink grant and given up uplink transmission corresponding to the first uplink grant;

wherein the selection rule comprises determining a target uplink grant located after the first uplink grant in time domain as the second uplink grant;

wherein a type of the first uplink grant is a configured uplink grant, the target uplink grant is a configured uplink grant, the target uplink grant corresponds to second configuration information, a time interval between the target uplink grant and the first uplink grant or between the target uplink grant and a time point of determining use of the target uplink grant is greater than or equal to target duration,

another time interval between the first uplink grant and another uplink grant, located before the target uplink grant in time domain, in uplink grants corresponding to the second configuration information is less than the target duration, and the target duration is minimum duration required for reconstructing a data packet by the terminal device; wherein the second configuration information comprises at least one piece of uplink grant configuration information.

15. A terminal device, comprising a memory, a processor, and a computer program stored in the memory and capable of running on the processor, wherein when the computer program is executed by the processor, the steps of the method for data transmission according to any one of claims 1 to 7 are implemented.

16. A computer-readable storage medium, wherein a computer program is stored in the computer-readable storage medium, and when the computer program is executed by a processor, the steps of the method for data transmission according to any one of claims 1 to 7 or the steps of the method for data reception according to any one of claims 8 to 12 are implemented.