CLAIMS

1. A method for data transmission, comprising:

notifying, by a terminal device, attribute information of uplink data to be sent by the terminal device to a network device through a scheduling request, comprising:

notifying, by the terminal device, the attribute information of the uplink data to be sent to the network device through a resource occupied by the scheduling request;

receiving, by the terminal device, indication information sent by the network device, the indication information indicating an uplink grant for the uplink data to be sent; and

sending, by the terminal device, the uplink data to be sent according to the uplink grant.

2. The method of claim 1, wherein the scheduling request comprises an indication field, and the indication field indicates the attribute information of the uplink data to be sent; and

notifying, by the terminal device, the attribute information of the uplink data to be sent by the terminal device to the network device through the scheduling request comprises:

notifying, by the terminal device, the attribute information of the uplink data to be sent to the network device through the indication field in the scheduling request.

3. The method of claim 1, wherein notifying, by the terminal device, the attribute information of the uplink data to be sent by the terminal device to the network device through the scheduling request further comprises:

notifying, by the terminal device, the attribute information of the uplink data to be sent to the network device through target received power corresponding to the scheduling request.

4. The method of claim 1, wherein the resource occupied by the scheduling request and configured to notify the attribute information of the uplink data to be sent to the network device comprises at least one of:

a code-domain resource, a time-domain resource, a frequency-domain resource or a space-domain resource.

5. The method of any one of claims 1, 3 and 4, wherein notifying, by the terminal device, the attribute information of the uplink data to be sent to the network device through at least one of the resource occupied by the scheduling request or the target received power corresponding to the scheduling request comprises:

determining the resource configured to send the scheduling request according to the attribute information of the uplink data to be sent and correspondences between attribute information of data and resources; and

sending the scheduling request according to the determined resource.

6. The method of any one of claims 1 and 3-5, wherein notifying, by the terminal device, the attribute information of the uplink data to be sent to the network device through at least one of the resource occupied by the scheduling request or the target received power corresponding to the scheduling request comprises:

determining the target received power corresponding to the scheduling request configured to notify the attribute information of the uplink data to be sent according to the attribute information of the uplink data to be sent and correspondences between attribute information of

data and target received powers of a scheduling request;

determining transmitted power according to path loss between the network device and the terminal device and the target received power corresponding to the scheduling request; and

sending the scheduling request in the transmitted power.

7. The method of any one of claims 1-6, wherein the scheduling request comprises a preamble.

8. The method of claim 7, wherein the scheduling request comprises the preamble and the indication field, the indication field indicating the attribute information of the uplink data to be sent.

9. The method of any one of claims 1-8, wherein the scheduling request is physical-layer signaling.

10. The method of any one of claims 1-9, wherein the attribute information of the uplink data to be sent comprises at least one of:

a size of the uplink data to be sent, data stream information corresponding to the uplink data to be sent, bearer information corresponding to the uplink data to be sent, logical channel information corresponding to the uplink data to be sent or Quality of Service (QoS) level information of the uplink data to be sent.

11. The method of any one of claims 1-10, wherein the uplink grant for the uplink data to be sent contains at least one of:

a basic parameter set adopted to send the uplink data to be sent, a transport block size adopted to send the uplink data to be sent, a modulation and coding scheme adopted to send the uplink data to be sent, maximum power for sending of the uplink data to be sent, a resource adopted to send the uplink data to be sent or a Hybrid Automatic Repeat request (HARQ) process number corresponding to the uplink data to be sent.

12. The method of any one of claims 1-10, wherein the uplink grant for the uplink data to be sent comprises identification information, and the identification information is configured to index at least one of:

a basic parameter set adopted to send the uplink data to be sent, a transport block size adopted to send the uplink data to be sent, a modulation and coding scheme adopted to send the uplink data to be sent, maximum power for sending of the uplink data to be sent, a resource adopted to send the uplink data to be sent or a Hybrid Automatic Repeat reQuest (HARQ) process number corresponding to the uplink data to be sent.

13. The method of any one of claims 1-12, before notifying, by the terminal device, the attribute information of the uplink data to be sent by the terminal device to the network device through the scheduling request, further comprising:

receiving configuration information sent by the network device, the configuration information indicating:

at least one of attribute information of at least one service, the resource for sending the scheduling request, the target received power corresponding to the scheduling request or the basic parameter set; and/or

a mapping relationship between the attribute information of at least one service, the resource for sending the scheduling request, the target received power corresponding to the scheduling request and the basic parameter set.

14. A data transmission method, comprising:

acquiring, by a network device, attribute information of uplink data to be sent by a terminal device through a scheduling request sent by the terminal device, comprising:

acquiring, by the network device, the attribute information of the uplink data to be sent by the terminal device through a resource occupied by the scheduling request;

determining, by the network device, an uplink grant for the uplink data to be sent by the terminal device according to the attribute information of the uplink data to be sent by the terminal device; and

sending, by the network device, indication information to the terminal device, the indication information indicating the uplink grant for the uplink data to be sent.

15. A terminal device, comprising a sending unit and a receiving unit, wherein

the sending unit is configured to notify attribute information of uplink data to be sent by the terminal device to a network device through a scheduling request;

the receiving unit is configured to receive indication information sent by the network device, the indication information indicating an uplink grant for the uplink data to be sent; and

the sending unit is configured to send the uplink data to be sent according to the uplink grant;

wherein the sending unit is further configured to:

notify the attribute information of the uplink data to be sent to the network device through a resource occupied by the scheduling request.

16. The terminal device of claim 15, wherein the scheduling request comprises an indication field, and the indication field indicates the attribute information of the uplink data to be sent; and

the sending unit is further configured to:

notify the attribute information of the uplink data to be sent to the network device through the indication field in the scheduling request.

17. The terminal device of claim 15, wherein the sending unit is further configured to:

notify the attribute information of the uplink data to be sent to the network device through target received power corresponding to the scheduling request.

18. The terminal device of claim 15, wherein the resource occupied by the scheduling request and configured to notify the attribute information of the uplink data to be sent to the network device comprises at least one of:

a code-domain resource, a time-domain resource, a frequency-domain resource or a space-domain resource.

19. The terminal device of any one of claims 15, 17 and 18, wherein the sending unit is further configured to:

determine the resource configured to send the scheduling request according to the attribute information of the uplink data to be sent and correspondences between attribute information of data and resources; and

send the scheduling request according to the determined resource.

20. The terminal device according to any one of claims 15 and 17-19, wherein the sending unit is further configured to:

determine the target received power corresponding to the scheduling request configured to notify the attribute information of the uplink data to be sent according to the attribute information of the uplink data to be sent and correspondences between attribute information of data and target received powers of a scheduling request;

determine transmitted power according to path loss between the network device and the terminal device and the target received power corresponding to the scheduling request; and

send the scheduling request in the transmitted power.

21. The terminal device of any one of claims 15-20, wherein the scheduling request comprises a preamble.

22. The terminal device of claim 21, wherein the scheduling request comprises the preamble and the indication field, the indication field indicating the attribute information of the uplink data to be sent.

23. The terminal device of any one of claims 15-22, wherein the scheduling request is physical-layer signaling.

24. The terminal device of any one of claims 15-23, wherein the attribute information of the uplink data to be sent comprises at least one of:

a size of the uplink data to be sent, data stream information corresponding to the uplink data to be sent, bearer information corresponding to the uplink data to be sent, logical channel information corresponding to the uplink data to be sent or Quality of Service (QoS) level information of the uplink data to be sent.

25. The terminal device of any one of claims 15-24, wherein the uplink grant for the uplink data to be sent contains at least one of:

a basic parameter set adopted to send the uplink data to be sent, a transport block size adopted to send the uplink data to be sent, a modulation and coding scheme adopted to send the uplink data to be sent, maximum power for sending of the uplink data to be sent, a resource adopted to send the uplink data to be sent or a Hybrid Automatic Repeat reQuest (HARQ) process number corresponding to the uplink data to be sent.

26. The terminal device of any one of claims 15-24, wherein the uplink grant for the uplink data to be sent comprises identification information, and the identification information is configured to index at least one of:

a basic parameter set adopted to send the uplink data to be sent, a transport block size adopted to send the uplink data to be sent, a modulation and coding scheme adopted to send the uplink data to be sent, maximum power for sending of the uplink data to be sent, a resource adopted to send the uplink data to be sent or a Hybrid Automatic Repeat reQuest (HARQ) process number corresponding to the uplink data to be sent.

27. The terminal device of any one of claims 15-26, wherein the receiving unit is further configured to:

receive configuration information sent by the network device, the configuration information indicating:

at least one of attribute information of at least one service, the resource for sending the scheduling request, the target received power corresponding to the scheduling request or the basic

parameter set; and/or

a mapping relationship between the attribute information of at least one service, the resource for sending the scheduling request, the target received power corresponding to the scheduling request and the basic parameter set.