

What is claimed is:

1. A method for processing a scheduling request, applied to a terminal, the method comprising:

indicating, by a media access control (MAC) layer, a physical layer to send a first
5 scheduling request;

wherein

in a case where an uplink control channel resource transmitting the first scheduling
request overlaps or partially overlaps with a first uplink data channel resource, if a logical
channel corresponding to a first service triggers the first scheduling request, and a priority of
10 the first service is higher than a priority of a service transmitted on a first uplink data channel,
the MAC layer indicates to the physical layer to transmit preferentially the first scheduling
request or the uplink control channel resource corresponding to the first scheduling request;

wherein the MAC layer indicating the physical layer to send the first scheduling request
comprises:

15 in a case that a first condition is met, the MAC layer indicating the physical layer to send
the first scheduling request;

the MAC layer determining the first condition according to at least one of: an identifier of
a logical channel triggering the scheduling request, an identifier of a service triggering the
scheduling request, an identifier of a service corresponding to uplink control information (UCI),
20 a priority corresponding to the UCI, a priority of a logical channel to be transmitted, an
identifier of a logical channel to be transmitted, an identifier/a priority of a service to be
transmitted, an identifier/a priority of a service/a media access control control element (MAC
CE)/a logical channel carried by a physical uplink shared channel (PUSCH), second
information from a network.

25 2. The method according to claim 1, further comprising:

determining, by the physical layer according to a first rule, at least one of:

a scheduling request needing to be transmitted;

a priority of uplink control information; and

a priority of an uplink control channel.

3. The method according to claim 1 or 2, further comprising:

the MAC layer indicating the first information to the physical layer.

5 4. The method according to claim 3, wherein the first information comprises at least one of following information corresponding to the first scheduling request:

pre-emption indication information;

service type information;

service priority information;

10 logical channel information;

logical channel priority information;

logical channel group information;

logical channel group priority information; and

first service indication information.

15 5. The method according to claim 3, wherein the first information comprises at least one of following information corresponding to the first scheduling request:

pre-emption indication information;

service type information;

service priority information;

20 logical channel information;

logical channel priority information;

logical channel group information;

logical channel group priority information;

first service indication information;

25 priority information; and

priority level information.

6. The method according to claim 1, further comprising:

the MAC layer determining a first resource to be transmitted according to at least one of:

a priority of a logical channel triggering the scheduling request, an identifier of a logical
 5 channel triggering the scheduling request, a priority of a service triggering the scheduling
 request, an identifier of a service triggering the scheduling request, an identifier of a service
 corresponding to hybrid automatic repeat request (HARQ) feedback, an identifier of a logical
 channel corresponding to the HARQ feedback, an identifier corresponding to the HARQ
 feedback, a priority of a service corresponding to the HARQ feedback, a priority of a logical
 10 channel corresponding to the HARQ feedback, a priority corresponding to the HARQ feedback,
 an identifier of a service corresponding to a (channel state information reference signal) CSI-RS,
 an identifier of a logical channel corresponding to the CSI-RS, an identifier corresponding to
 the CSI-RS, a priority of a service corresponding to the CSI-RS, a priority of a logical channel
 corresponding to the CSI-RS, a priority corresponding to the CSI-RS, second information from
 15 the network, an identifier of a service corresponding to UCI, a priority corresponding to the
 UCI, the first information, and a priority/an identifier of a logical channel/a service/data to be
 transmitted triggering a Physical Random Access Channel (PRACH); wherein the first resource
 is at least one of the scheduling request (SR), a configured physical uplink shared channel
 (PUSCH), the CSI-RS, the HARQ feedback, and the PRACH.

20 7. The method according to any one of claims 1 to 6, wherein the first condition
 comprises at least one of:

that an uplink control channel resource transmitting the first scheduling request overlaps
 with an uplink control channel resource transmitting a second scheduling request, and a priority
 of a logical channel and/or logical channel group for the first scheduling request is higher than a
 25 priority of a logical channel and/or logical channel group for the second scheduling request, the
 first scheduling request and the second scheduling request being pending scheduling requests;

that the uplink control channel resource transmitting the first scheduling request overlaps
 with the uplink control channel resource transmitting the second scheduling request, and a

priority of a service corresponding to the first scheduling request is higher than a priority of a service corresponding to the second scheduling request, the first scheduling request and the second scheduling request being pending scheduling requests;

5 that the uplink control channel resource transmitting the first scheduling request overlaps with the uplink control channel resource transmitting the second scheduling request, and a service type corresponding to the first scheduling request is a high reliability and low latency service, the first scheduling request and the second scheduling request being pending scheduling requests;

10 that the uplink control channel resource transmitting the first scheduling request overlaps with the uplink control channel resource transmitting the second scheduling request, and a priority of a logical channel and/or logical channel group for the first scheduling request is not lower than a priority of a logical channel and/or logical channel group for the second scheduling request, the first scheduling request and the second scheduling request being pending scheduling requests;

15 that the uplink control channel resource transmitting the first scheduling request overlaps with the uplink control channel resource transmitting the second scheduling request, and a priority of a service corresponding to the first scheduling request is not lower than a priority of a service corresponding to the second scheduling request, the first scheduling request and the second scheduling request being pending scheduling requests;

20 that the uplink control channel resource transmitting the first scheduling request overlaps with an uplink control channel resource transmitting a third scheduling request, and a priority of a logical channel and/or logical channel group for the first scheduling request is higher than a priority of a logical channel and/or logical channel group for the third scheduling request, the first scheduling request being a pending scheduling request, and the third scheduling request
25 being a scheduling request which the physical layer has been indicated to transmit;

that the uplink control channel resource transmitting the first scheduling request overlaps with the uplink control channel resource transmitting the third scheduling request, and a priority of a service for the first scheduling request is higher than a priority of a service for the third

scheduling request, the first scheduling request being a pending scheduling request, and the third scheduling request being a scheduling request which the physical layer has been indicated to transmit;

5 that the uplink control channel resource transmitting the first scheduling request overlaps with the uplink control channel resource transmitting the third scheduling request, and a service type corresponding to the first scheduling request is a high reliability and low latency service, the first scheduling request being a pending scheduling request, and the third scheduling request being a scheduling request which the physical layer has been indicated to transmit;

10 that the uplink control channel resource transmitting the first scheduling request overlaps with the uplink control channel resource transmitting the third scheduling request, and a priority of a logical channel and/or logical channel group for the first scheduling request is not lower than a priority of a logical channel and/or logical channel group for the third scheduling request, the first scheduling request being a pending scheduling request, and the third scheduling request being a scheduling request which the physical layer has been indicated to transmit;

15 that the uplink control channel resource transmitting the first scheduling request overlaps with the uplink control channel resource transmitting the third scheduling request, and a priority of a service corresponding to the first scheduling request is not lower than a priority of a service corresponding to the third scheduling request, the first scheduling request being a pending scheduling request, and the third scheduling request being a scheduling request which the physical layer has been indicated to transmit;

20

that the first scheduling request is a first pending scheduling request after a previous pending scheduling request is cancelled;

that the first scheduling request is a first pending scheduling request triggered after a latest MAC protocol data unit (PDU) is packed

25 that the first scheduling request is a scheduling request which the physical layer is not indicated to transmit after a previous pending scheduling request is cancelled;

that the first scheduling request is a first pending scheduling request after a previous pending scheduling request is cancelled, and a service and/or a logical channel and/or a logical

channel group triggering the scheduling request correspond to a first service;

that the first scheduling request is a first pending scheduling request triggered after a latest MAC PDU is packed, and a service and/or a logical channel and/or a logical channel group triggering the scheduling request correspond to the first service; and

5 that the first scheduling request is a scheduling request which the physical layer is not indicated to transmit after a previous pending scheduling request is cancelled, and a service and/or a logical channel and/or a logical channel group triggering the scheduling request correspond to the first service.

8. A device for processing a scheduling request, comprising:

10 an indicating unit, configured to indicate, through a media access control (MAC) layer, a physical layer to send a first scheduling request;

wherein

the indicating unit is configured to, in a case where an uplink control channel resource transmitting the first scheduling request overlaps or partially overlaps with a first uplink data
15 channel resource, if a logical channel corresponding to a first service triggers the first scheduling request, and a priority of the first service is higher than a priority of a service transmitted on a first uplink data channel, indicate the physical layer through the MAC layer to transmit preferentially the first scheduling request or the uplink control channel resource corresponding to the first scheduling request;

20 the indicating unit is configured to, in a case that a first condition is met, indicate the physical layer through the MAC layer to send the first scheduling request;

further comprising:

a determining unit, configured to determine the first condition according to at least one of:
an identifier of a logical channel triggering the scheduling request, an identifier of a service
25 triggering the scheduling request, an identifier of a service corresponding to uplink control information (UCI), a priority corresponding to the UCI, a priority of a logical channel to be transmitted, an identifier of a logical channel to be transmitted, an identifier/a priority of a service to be transmitted, an identifier/a priority of a service/a media access control control

element (MAC CE)/a logical channel carried by a physical uplink shared channel (PUSCH), second information from a network.

9. The device according to claim 8, wherein:

the determining unit is configured to determine, through the physical layer according to a

5 first rule, at least one of:

a scheduling request needing to be transmitted;

a priority of uplink control information; and

a priority of an uplink control channel.