

Claims

1. A data transmission method, comprising:

in case that a presence of to-be-transmitted data of a second service of a terminal is detected, receiving, by the terminal, data of the second service of the terminal by using a first
 5 resource corresponding to a first service, when a first discontinuous reception (DRX) mechanism of the first service is on-duration but a second DRX mechanism of the second service is in a dormant period; wherein a priority of the second service is greater than a priority of the first service; wherein DRX mechanisms corresponding to different services of the terminal are different, the first service corresponds to the first DRX mechanism, and the second
 10 service corresponds to the second DRX mechanism.

2. The method of claim 1, wherein the first DRX mechanism refers to a DRX mechanism of the terminal on the first resource corresponding to the first service, the second DRX mechanism refers to a DRX mechanism of the terminal on a second resource corresponding to the second service, and difference between the first resource and the second resource comprises
 15 difference between a radio frequency (RF) band corresponding to the first service and a radio frequency (RF) band corresponding to the second service, or comprises difference between a baseband processing mode corresponding to the first service and a baseband processing mode corresponding to the second service under a same radio frequency resource.

3. The method of claim 1 or 2, wherein receiving, by the terminal, the data of the second
 20 service of the terminal by using the first resource corresponding to the first service comprises:

receiving, by the terminal, a downlink control channel during the on-duration of the first DRX mechanism corresponding to the first service, wherein the downlink control channel is used for scheduling the data of the second service; and

receiving, by the terminal, the data of the second service of the terminal by using the first
 25 resource corresponding to the first service according to the downlink control channel.

4. The method of any one of claims 1-3, wherein the method further comprises:

entering, by the terminal, an on-duration at a start position of an on-duration of the second DRX mechanism; or

entering, by the terminal, a dormant duration at the start position of the on-duration of the second DRX mechanism.

5. A data transmission method, comprising:

entering, by a terminal, an on-duration in a second DRX mechanism of a second service
 5 during an on-duration of a first discontinuous reception (DRX) mechanism of a first service, in case that a presence of to-be-transmitted data of the second service of the terminal is detected, wherein a priority of the second service is greater than a priority of the first service; wherein DRX mechanisms corresponding to different services of the terminal are different, the first service corresponds to the first DRX mechanism, and the second service corresponds to the
 10 second DRX mechanism; and

receiving, by the terminal, data of the second service by using a second resource corresponding to the second service during the on-duration of the first DRX mechanism.

6. The method of claim 5, wherein the first DRX mechanism refers to a DRX mechanism of the terminal on a first resource corresponding to the first service, the second DRX
 15 mechanism refers to a DRX mechanism of the terminal on the second resource corresponding to the second service, and difference between the first resource and the second resource comprises difference between a radio frequency (RF) band corresponding to the first service and a radio frequency (RF) band corresponding to the second service, or comprises difference between a baseband processing mode corresponding to the first service and a baseband processing mode
 20 corresponding to the second service under a same radio frequency resource.

7. The method of claim 5 or 6, wherein entering, by the terminal, the on-duration in the second DRX mechanism of the second service comprises:

receiving, by the terminal, indication information during the on-duration of the first DRX mechanism, wherein the indication information is sent by a network side device when the
 25 network side device detects to-be-transmitted data of the second service of the terminal during the on-duration of the first DRX mechanism and the second DRX mechanism is in a dormant period; and

entering, by the terminal, the on-duration in the second DRX mechanism of the second service according to the indication information.

8. The method of any one of claims 5-7, wherein receiving, by the terminal, the data of the second service by using the second resource corresponding to the second service during the on-duration of the first DRX mechanism comprises:

receiving, by the terminal, a downlink control channel during the on-duration of the first
 5 DRX mechanism and during the on-duration of the second DRX mechanism corresponding to the second service, wherein the downlink control channel is used for scheduling the data of the second service; and

receiving, by the terminal, the data of the second service by using the second resource corresponding to the second service according to the downlink control channel during the
 10 on-duration of the first DRX mechanism.

9. A terminal, comprising: a processing unit and a communication unit; wherein

the processing unit is used for, in case that a presence of to-be-transmitted data of a second service of a terminal is detected, receiving data of the second service through the communication unit by using a first resource corresponding to a first service, when a first
 15 discontinuous reception (DRX) mechanism of the first service is on-duration but a second DRX mechanism of the second service is in a dormant period; wherein a priority of the second service is greater than a priority of the first service; wherein DRX mechanisms corresponding to different services of the terminal are different, the first service corresponds to the first DRX mechanism, and the second service corresponds to the second DRX mechanism.

20 10. The terminal of claim 9, wherein the first DRX mechanism refers to a DRX mechanism of the terminal on the first resource corresponding to the first service, a second DRX mechanism refers to a DRX mechanism of the terminal on a second resource corresponding to the second service, and difference between the first resource and the second resource comprises difference between a radio frequency (RF) band corresponding to the first
 25 service and a radio frequency (RF) band corresponding to the second service, or comprises difference between a baseband processing mode corresponding to the first service and a baseband processing mode corresponding to the second service under a same radio frequency resource.

11. The terminal according to claim 9 or 10, wherein the processing unit is specifically

used for: receiving a downlink control channel during the on-duration of the first DRX mechanism corresponding to the first service, wherein the downlink control channel is used for scheduling the data of the second service; and receiving the data of the second service of the terminal by using the first resource corresponding to the first service according to the downlink control channel.

12. The terminal of any one of claims 9-11, wherein the processing unit is further used for: entering an on-duration at a start position of an on-duration of the second DRX mechanism; or entering a dormant duration at the start position of the on-duration of the second DRX mechanism.

13. A terminal, comprising: a processing unit and a communication unit; wherein the processing unit is used for entering an on-duration in a second discontinuous reception (DRX) mechanism of a second service during an on-duration of a first DRX mechanism of a first service, in case that a presence of to-be-transmitted data of the second service of the terminal is detected, wherein a priority of the second service is greater than a priority of the first service; and the processing unit is used for receiving data of the second service through the communication unit by using a second resource corresponding to the second service during the on-duration of the first DRX mechanism; wherein DRX mechanisms corresponding to different services of the terminal are different, the first service corresponds to the first DRX mechanism, and the second service corresponds to the second DRX mechanism.

14. The terminal of claim 13, wherein the first DRX mechanism refers to a DRX mechanism of the terminal on a first resource corresponding to the first service, the second DRX mechanism refers to a DRX mechanism of the terminal on the second resource corresponding to the second service, and difference between the first resource and the second resource comprises difference between a radio frequency (RF) band corresponding to the first service and a radio frequency (RF) band corresponding to the second service, or comprises difference between a baseband processing mode corresponding to the first service and a baseband processing mode corresponding to the second service under a same radio frequency resource.

15. The terminal according to claim 13 or 14, wherein the processing unit is specifically

used for receiving indication information through the communication unit during the on-duration of the first DRX mechanism, wherein the indication information is sent by a network side device when the network side device detects to-be-transmitted data of the second service of the terminal during the on-duration of the first DRX mechanism and the second DRX mechanism is in a dormant period; and the processing unit is specifically used for entering the on-duration in the second DRX mechanism of the second service according to the indication information.

16. The terminal of any one of claims 13-15, wherein the processing unit is specifically used for receiving a downlink control channel through the communication unit during the on-duration of the first DRX mechanism and during the on-duration of the second DRX mechanism corresponding to the second service, wherein the downlink control channel is used for scheduling the data of the second service; and the processing unit is specifically used for receiving the data of the second service through the communication unit by using the second resource corresponding to the second service according to the downlink control channel during the on-duration of the first DRX mechanism.

17. A network side device, comprising: a processing unit and a communication unit; wherein

the processing unit is used for, in case of detecting a presence of to-be-transmitted data of a second service of a terminal, sending data of the second service through the communication unit by using a second resource corresponding to the second service of a terminal, when a first discontinuous reception (DRX) mechanism of the first service is on-duration but a second DRX mechanism of the second service is in a dormant period, wherein a priority of the second service is greater than a priority of the first service; wherein DRX mechanisms corresponding to different services of the terminal are different, the first service corresponds to the first DRX mechanism, and the second service corresponds to the second DRX mechanism.

18. The network side device of claim 17, wherein the first DRX mechanism refers to a DRX mechanism of the terminal on a first resource corresponding to the first service, a second DRX mechanism refers to a DRX mechanism of the terminal on the second resource corresponding to the second service, and difference between the first resource and the second

resource comprises difference between a radio frequency (RF) band corresponding to the first service and a radio frequency (RF) band corresponding to the second service, or comprises difference between a baseband processing mode corresponding to the first service and a baseband processing mode corresponding to the second service under a same radio frequency resource.

19. The network side device of claim 17 or 18, wherein the processing unit is further used for: before sending the data of the second service through the communication unit by using the second resource corresponding to the second service, sending indication information through the communication unit when detecting to-be-transmitted data of the second service during the on-duration of the first DRX mechanism, and a second DRX mechanism is in a dormant period; wherein the indication information is used for the terminal to enter an on-duration in the second DRX mechanism.

20. The network side device of claim 19, wherein the indication information comprises indication information indicating arrival of downlink data of the second service, or indication information indicating the terminal to enter the on-duration in the second DRX mechanism, and the indication information is sent by any one of the following manners: a downlink control channel, a downlink shared channel, and a media access control control element.