CLAIMS

1. A method for transmitting data, comprising:

determining, by a transmitter, a first target numerology for transmitting a first beam of a first data from N numerologies, wherein different numerologies in the N numerologies comprise at least one of different frequency-domain numerologies or different time-domain numerologies, N being an integer more than or equal to 2; and

transmitting, by the transmitter, the first beam on a time-domain resource, a space-domain resource and a frequency-domain resource according to the first target numerology,

wherein the method further comprises:

determining, by the transmitter, a second target numerology for transmitting a second beam of a second data from the N numerologies, wherein the first data is the same as the second data; and

transmitting, by the transmitter, the second beam on the time-domain resource, the space-domain resource and the frequency-domain resource according to the second target numerology;

before transmitting, by the transmitter, the first beam on the time-domain resource, the space-domain resource and the frequency-domain resource according to the first target numerology, the method further comprises:

acquiring, by the transmitter, a resource interval;

wherein transmitting, by the transmitter, the first beam on the time-domain resource, the space-domain resource and the frequency-domain resource according to the first target numerology comprises:

using, by the transmitter, the first target numerology to transmit the first beam on a first frequency-domain resource according to the resource interval; and

wherein transmitting, by the transmitter, the second beam on the time-domain resource, the space-domain resource and the frequency-domain resource according to the second target numerology comprises:

using, by the transmitter, the second target numerology to transmit the second beam on a second frequency-domain resource according to the resource interval, wherein the first frequency-domain resource and the second frequency-domain resource are adjacent resources for transmitting the same data according to the

resource interval.

2. A method for transmitting data, comprising:

determining, by a transmitter, a first target numerology for transmitting a first beam of a first data from N numerologies, wherein different numerologies in the N numerologies comprise at least one of different frequency-domain numerologies or different time-domain numerologies, N being an integer more than or equal to 2; and

transmitting, by the transmitter, the first beam on a time-domain resource, a space-domain resource and a frequency-domain resource according to the first target numerology,

wherein the method further comprises:

determining, by the transmitter, a second target numerology for transmitting a second beam of a second data from the N numerologies, wherein the first data is the same as the second data; and

transmitting, by the transmitter, the second beam on the time-domain resource, the space-domain resource and the frequency-domain resource according to the second target numerology;

before transmitting, by the transmitter, the first beam on the time-domain resource, the space-domain resource and the frequency-domain resource according to the first target numerology, the method further comprises:

acquiring, by the transmitter, a time interval period;

wherein transmitting, by the transmitter, the first beam on the time-domain resource, the space-domain resource and the frequency-domain resource according to the first target numerology comprises:

using, by the transmitter, the first target numerology to transmit the first beam at a first moment according to the time interval period; and

wherein transmitting, by the transmitter, the second beam on the time-domain resource, the space-domain resource and the frequency-domain resource according to the second target numerology comprises:

using, by the transmitter, the second target numerology to transmit the second beam at a second moment according to the time interval period, wherein the first moment and the second moment are adjacent moments for transmitting the same data according to the time interval period.

3. The method of claim 1 or 2, wherein different frequency domain numerologies comprise at least one of:

different subcarrier spacings, different basic frequency-domain units, different frequency-domain unit patterns or different subcarrier patterns.

4. The method of any one of claims 1-3, wherein determining, by the transmitter, the first target numerology for transmitting the first beam of the first data from the N numerologies comprises:

determining, by the transmitter, a data type of the first data; and

determining, by the transmitter, the first target numerology according to the data type of the first data.

5. The method of any one of claims 1-4, wherein the transmitter is a network device and the receiver is a terminal device; and

before determining, by the transmitter, the first target numerology for transmitting the first beam of the first data from the N numerologies, the method further comprises:

transmitting, by the network device, first indication information to the terminal device, wherein the first indication information is configured to indicate a correspondence between the data type and the first target numerology.

6. The method of any one of claims 1-4, wherein the transmitter is a terminal device and the receiver is a network device;

before determining, by the transmitter, the first target numerology for transmitting the first beam of the first data from the N numerologies, the method further comprises:

receiving, by the terminal device, second indication information sent by the network device, wherein the second indication information is configured to indicate a correspondence between the data type and the first target numerology; and

wherein determining, by the transmitter, the first target numerology for transmitting the first beam of the first data from the N numerologies comprises:

determining, by the terminal device, the first target numerology in the N

numerologies according to the second indication information.

7. The method of any one of claims 1-5, wherein the transmitter is a network device and the receiver is a terminal device;

before transmitting, by the transmitter, the first beam on the time-domain resource, the space-domain resource and the frequency-domain resource according to the first target numerology, the method further comprises:

transmitting, by the network device, resource location indication information to the terminal device, wherein the resource location indication information is configured to indicate a resource location where the first beam is located; and

receiving, by the terminal device, the resource location indication information sent by the network device; and

after transmitting, by the transmitter, the first beam on the time-domain resource, the space-domain resource and the frequency-domain resource according to the first target numerology, the method further comprises:

receiving, by the terminal device, the first beam according to the resource location indication information.

8. The method of any one of claims 1-7, wherein a data type of the first data comprises at least one of control-plane data or user-plane data.

9. The method of any one of claims 1-7, wherein data of different data types correspond to different target numerologies.

10. A device for transmitting data, comprising:

a determination module, configured to determine a first target numerology for transmitting a first beam of a first data from N numerologies, wherein different numerologies in the N numerologies comprise at least one of different frequency-domain numerologies or different time-domain numerologies, N being an integer more than or equal to 2; and

a transmitting module, configured to transmit the first beam on a time-domain resource, a space-domain resource and a frequency-domain resource according to the first target numerology,

wherein the determination module is further configured to:

determine a second target numerology for transmitting a second beam of a second data in the N numerologies, wherein a data type of the second data is different from the data type of the first data and the second target numerology is different from the first target numerology; and

wherein the transmitting module is further configured to transmit the second beam on the time-domain resource, the space-domain resource and the frequency-domain resource according to the second target numerology,

wherein the first data is the same as the second data;

the device further comprises a second acquisition module, configured to acquire a resource interval before the first beam is transmitted on the time-domain resource, the space-domain resource and the frequency-domain resource according to the first target numerology;

wherein the transmitting module is further configured to use the first target numerology to transmit the first beam on a first frequency-domain resource according to the resource interval; and

the transmitting module is further configured to use the second target numerology to transmit the second beam on a second frequency-domain resource according to the resource interval, wherein the first frequency-domain resource and the second frequency-domain resource are adjacent resources for transmitting the same data according to the resource interval.

11. A device for transmitting data, comprising:

a determination module, configured to determine a first target numerology for transmitting a first beam of a first data from N numerologies, wherein different numerologies in the N numerologies comprise at least one of different frequency-domain numerologies or different time-domain numerologies, N being an integer more than or equal to 2; and

a transmitting module, configured to transmit the first beam on a time-domain resource, a space-domain resource and a frequency-domain resource according to the first target numerology,

wherein the determination module is further configured to:

determine a second target numerology for transmitting a second beam of a

second data in the N numerologies, wherein a data type of the second data is different from the data type of the first data and the second target numerology is different from the first target numerology; and

wherein the transmitting module is further configured to transmit the second beam on the time-domain resource, the space-domain resource and the frequency-domain resource according to the second target numerology,

wherein the first data is the same as the second data;

the device further comprises a second acquisition module, configured to acquire a time interval period before the first beam is transmitted on the time-domain resource, the space-domain resource and the frequency-domain resource according to the first target numerology,

wherein the transmitting module is further configured to use the first target numerology to transmit the first beam at a first moment according to the time interval period; and

the transmitting module is further configured to use the second target numerology to transmit the second beam at a second moment according to the time interval period, wherein the first moment and the second moment are adjacent moments for transmitting the same data according to the time interval period.

12. The device of claim 10 or 11, wherein different frequency domain numerologies comprise at least one of:

different subcarrier spacings, different basic frequency-domain units, different frequency-domain unit patterns or different subcarrier patterns.

13. The device of any one of claims 10-12, wherein the determination unit is specifically configured to:

determine a data type of the first data; and

determine the first target numerology according to the data type of the first data.

14. The device of any one of claims 10-13, wherein the device is a network device and the receiver is a terminal device; and

the transmitting module is further configured to, before the first target

numerology for transmitting the first beam of the first data in the N numerologies is determined, transmit first indication information to the terminal device, wherein the first indication information is configured to indicate a correspondence between the data type and the first target numerology.

15. The device of any one of claims 10-13, wherein the device is a terminal device and the receiver is a network device; and

the device further comprises a receiving module, configured to, before the first target numerology for transmitting the first beam of the first data in the N numerologies is determined, receive second indication information sent by the network device, wherein the second indication information is configured to indicate the correspondence between the data type and the first target numerology; and

the determination module is further configured to determine the first target numerology in the N numerologies according to the second indication information.