

## CLAIMS

What is claimed is:

1. A method for selecting a random access request resource, applied to a terminal and comprising:

obtaining configuration information for a random access procedure used for transmitting uplink data, wherein the configuration information is used for at least one data size range and a random access request resource corresponding to each data size range; and

selecting, according to the configuration information, a random access request resource corresponding to a data size range of uplink data;

wherein the selecting a random access request resource corresponding to a data size range of uplink data comprises:

a second random access request resource is selected after the data size range is determined; wherein

the second random access request resource corresponds to all or part of the random access request resource corresponding to the data size range;

wherein the random access request resource is a numbering range of the random access preamble for PRACH;

the method further comprises: first selecting an uplink carrier corresponding to the random access procedure and then selecting the data size range corresponding to the random access procedure;

the uplink carrier comprises at least one of supplementary uplink (SUL) carrier or normal uplink (NUL) carrier.

2. The method for selecting a random access request resource according to claim 1, wherein the random access request resource comprises at least one of the following:

a time-frequency resource corresponding to a random access request;

a downlink signal corresponding to the random access request; and

a cell corresponding to the random access request.

3. The method for selecting a random access request resource according to claim 1, wherein a type of the random access procedure used for transmitting uplink data comprises at least one of the following:

a 4-step random access procedure in which the third message is used for sending uplink data through a data bearer DRB;

a 4-step random access procedure in which the third message is used for sending uplink data through a signaling bearer SRB;

a 2-step random access procedure in which the first message is used for sending uplink data through a data bearer DRB; and

a 2-step random access procedure in which the first message is used for sending uplink data through a signaling bearer SRB.

4. The method for selecting a random access request resource according to claim 1, wherein in a case that the first random access request resource comprises an uplink carrier, the selecting the first random access request resource comprises:

in a case that a plurality of uplink carriers of one cell are configured for the random access request resource and different data size ranges are configured, selecting the uplink carrier, and then selecting the data size range.

5. The method for selecting a random access request resource according to claim 1, wherein in a case that the second random access request resource comprises an uplink carrier, the selecting the second random access request resource comprises:

in a case that a plurality of uplink carriers of one cell are configured for the random access request resource and different data size ranges are configured, selecting the data size range, and then selecting the uplink carrier.

6. The method for selecting a random access request resource according to claim 1, wherein in a case that the first random access request resource comprises a downlink signal, the selecting the first random access request resource comprises:

in a case that a downlink signal is configured for the random access request resource and different data size ranges are configured, selecting the downlink signal, and then selecting the data size range.

7. The method for selecting a random access request resource according to claim 1, wherein in a case that the second random access request resource comprises a downlink signal, the selecting the second random access request resource comprises:

in a case that a downlink signal is configured for the random access request resource and different data size ranges are configured, selecting the data size range, and then selecting the downlink signal.

8. The method for selecting a random access request resource according to claim 1, wherein in a case that the first random access request resource comprises a time-frequency resource, the selecting the first random access request resource comprises:

in a case that same time-frequency resources are configured for different data size ranges and different code resources are configured, selecting a target time-frequency resource from the time-frequency resources, and then selecting the data size range.

9. The method for selecting a random access request resource according to claim 1, wherein in a case that the second random access request resource comprises a time-frequency resource, the selecting the second random access request resource comprises:

in a case that same time-frequency resources are configured for different data size ranges and different code resources are configured, selecting the data size range, and then selecting a target time-frequency resource from the time-frequency resources.

10. The method for selecting a random access request resource according to claim 1, wherein the selecting the first random access request resource and the second random access request resource comprises:

selecting the first random access request resource, selecting the data size range, and then selecting the second random access request resource.

11. The method for selecting a random access request resource according to claim 1, wherein the data size range of the uplink data is selected in one of the following manners:

selecting at least one data size range capable of carrying the uplink data;

selecting, from at least one data size range capable of carrying the uplink data, a data size range to which a size of the uplink data belongs;

selecting, from at least one data size range capable of carrying the uplink data, a data size range based on a signal strength; and

selecting, from at least one data size range capable of carrying the uplink data, a data size range based on a random number.

12. The method for selecting a random access request resource according to claim 2, wherein in a case that a plurality of uplink carriers configured for the random access request resource conflict with an uplink carrier corresponding to the data size range, the selecting a random access request resource corresponding to a data size range of uplink data further comprises any one of the following:

reselecting an uplink carrier;

reselecting a data size range;

selecting one uplink carrier out of selected uplink carriers; and

selecting one data size range out of selected data size ranges;

reselecting a downlink signal;

reselecting a data size range;

selecting one downlink signal out of selected downlink signals; and

selecting one data size range out of selected data size ranges.

13. A method for selecting a random access request resource, applied to a network device and comprising:

sending configuration information for a random access procedure used for transmitting uplink data, wherein the configuration information is used for at least one data size range and a random access request resource corresponding to each data size range;

wherein the configuration information indicates the terminal to select a random access request resource corresponding to a data size range of uplink data;

wherein the selecting a random access request resource corresponding to a data size range of uplink data comprises:

selecting a second random access request resource after the data size range is determined; and wherein,

the second random access request resource corresponds to all or part of the random access request resource corresponding to the data size range;

wherein the random access request resource is a numbering range of the random access preamble for PRACH;

the selecting a random access request resource further comprises: first selecting an uplink carrier corresponding to the random access procedure and then selecting the data size range corresponding to the random access procedure;

the uplink carrier comprises at least one of supplementary uplink (SUL) carrier or normal uplink (NUL) carrier.

14. A terminal, comprising:

an obtaining module, configured to obtain configuration information for a random access procedure used for transmitting uplink data, wherein the configuration information is used for at least one data size range and a random access request resource corresponding to each data size range; and

a selection module, configured to select, according to the configuration information, a random access request resource corresponding to a data size range of uplink data;

wherein the selection module is further configured to select a second random access request resource after the data size range is determined; wherein

the second random access request resource corresponds to all or part of the random access request resource corresponding to the data size range;

wherein the random access request resource is a numbering range of the random access preamble for PRACH;

the selection module is further configured to first select an uplink carrier corresponding to the random access procedure and then select the data size range corresponding to the random access procedure;

the uplink carrier comprises at least one of supplementary uplink (SUL) carrier or normal uplink (NUL) carrier.

15. The terminal according to claim 14, wherein the random access request resource comprises at least one of the following:

a time-frequency resource corresponding to a random access request;

a downlink signal corresponding to the random access request; and

a cell corresponding to the random access request.

16. The terminal according to claim 14, wherein a type of the random access procedure used for transmitting uplink data comprises at least one of the following:

a 4-step random access procedure in which the third message is used for sending uplink data through a data bearer DRB;

a 4-step random access procedure in which the third message is used for sending uplink data through a signaling bearer SRB;

a 2-step random access procedure in which the first message is used for sending uplink data through a data bearer DRB; and

a 2-step random access procedure in which the first message is used for sending uplink data through a signaling bearer SRB.

17. A network device, comprising:

a transmitting module, configured to send configuration information for a random access procedure used for transmitting uplink data, wherein the configuration information is used for at least one data size range and a random access request resource corresponding to each data size range;

wherein the configuration information indicates the terminal to select a random access request resource corresponding to a data size range of uplink data;

the selecting a random access request resource corresponding to a data size range of uplink data comprises:

selecting a second random access request resource after the data size range is determined; wherein

the second random access request resource corresponds to all or part of the random access request resource corresponding to the data size range;

wherein the random access request resource is a numbering range of the random access preamble for PRACH;

the selecting a random access request resource further comprises: first selecting an uplink carrier corresponding to the random access procedure and then selecting the data size range corresponding to the random access procedure;

the uplink carrier comprises at least one of supplementary uplink (SUL) carrier or normal uplink (NUL) carrier.

18. A computer-readable storage medium, wherein the computer-readable storage medium stores a computer program, and when the computer program is executed by a processor, the steps of the method for selecting a random access request resource according to any one of claims 1 to 13 are implemented.