

What we claim is:

1. A method for random access, comprising:

sending, by a terminal device, an access request message to a network device, and indicating access auxiliary information of the terminal device to the network device through the access request message; and

receiving, by the terminal device, an access response message sent by the network device according to the access request message, wherein the access response message comprises indication information for indicating rejection of access of the terminal device, and the indication information comprises access suggestion information corresponding to the access auxiliary information;

wherein the access auxiliary information comprises at least one of following pieces of information:

access information of the terminal device, service information of the terminal device, a type of a bearer set up by the terminal device, a data stream for transmitting the access request message, and a logical channel for transmitting the access request message.

2. The method according to claim 1, wherein the access information of the terminal device comprises an access level of the terminal device;

the device information of the terminal device comprises a priority of the terminal device or a device type of the terminal device;

the service information of the terminal device comprises at least one of following pieces of information: a service application level of the terminal device, a service quality level of the terminal device, a reason for the terminal device to set up the service, core network information for the terminal device to set up the service, and a service type of the service.

3. The method according to claim 1 or claim 2, wherein the access suggestion information comprises at least one of following pieces of information:

information of a duration during which the terminal device is prohibited from accessing, information of a cell where the network device suggests the terminal device to reside, and information of a network that the network device suggests the terminal device to access.

4. A method for random access, comprising:

sending, by a terminal device, an access request message to a network device;

receiving, by the terminal device, an access response message sent by the network device

according to the access request message; and

determining, by the terminal device, access suggestion information corresponding to access auxiliary information of the terminal device according to the access response message;

wherein the access auxiliary information comprises at least one of following pieces of information:

access information of the terminal device, service information of the terminal device, a type of a bearer set up by the terminal device, a data stream for transmitting the access request message, and a logical channel for transmitting the access request message.

5. A terminal device, comprising:

a sending unit, used for sending an access request message to a network device and indicating access auxiliary information of the terminal device to the network device through the access request message; and

a receiving unit, used for receiving an access response message sent by the network device according to the access request message, wherein the access response message comprises indication information for indicating rejection of access of the terminal device, and the indication information comprises access suggestion information corresponding to the access auxiliary information;

wherein the access auxiliary information comprises at least one of following pieces of information:

access information of the terminal device, service information of the terminal device, a type of a bearer set up by the terminal device, a data stream for transmitting the access request message, and a logical channel for transmitting the access request message.

6. The terminal device according to claim 5, wherein the access information of the terminal device comprises an access level of the terminal device;

the device information of the terminal device comprises a priority of the terminal device or a device type of the terminal device;

the service information of the terminal device comprises at least one of following pieces of information: a service application level of the terminal device, a service quality level of the terminal device, a reason for the terminal device to set up the service, core network information for the terminal device to set up the service, and a service type of the service.

7. The terminal device according to claim 5 or claim 6, wherein the access suggestion

information comprises at least one of following pieces of information:

information of a duration during which the terminal device is prohibited from accessing, information of a cell where the network device suggests the terminal device to reside, and information of a network that the network device suggests the terminal device to access.

8. The terminal device according to any one of claims 5 to 7, wherein the sending unit is specifically used for:

sending the access request message carrying the access auxiliary information to the network device.

9. The terminal device according to any one of claims 5 to 8, wherein the sending unit is specifically used for:

determining a target resource for transmitting the access request message according to the access auxiliary information and a correspondence between a plurality of pieces of access auxiliary information and a plurality of transmission resources; and

using the target resource to send the access request message to the network device, so that the network device determines the access auxiliary information according to the correspondence and the target resource for receiving the access request message.

10. The terminal device according to claim 9, wherein the target resource comprises at least one of following:

a time domain resource, a frequency domain resource, a code domain resource, and a space resource.

11. The terminal device according to any one of claims 5 to 10, wherein,

the access request message comprises an access preamble sequence or a scheduling request message; or

the access request message comprises a radio resource control (RRC) connection setup request message, and the access response message comprises an RRC connection rejection message; or

the access request message comprises an RRC connection setup completion message, and the access response message comprises an RRC connection release message; or

the access request message comprises a protocol data unit (PDU), and the access response message comprises a protocol data unit (PDU).

12. A terminal device, comprising:

a sending unit, used for sending an access request message to a network device;

a receiving unit, used for receiving an access response message sent by the network device according to the access request message; and

a determining unit, used for determining access suggestion information corresponding to access auxiliary information of the terminal device according to the access response message received by the receiving unit;

wherein the access auxiliary information comprises at least one of following pieces of information:

access information of the terminal device, service information of the terminal device, a type of a bearer set up by the terminal device, a data stream for transmitting the access request message, and a logical channel for transmitting the access request message.

13. The terminal device according to claim 12, wherein the access information of the terminal device comprises an access level of the terminal device;

the device information of the terminal device comprises a priority of the terminal device and/or a device type of the terminal device;

the service information of the terminal device comprises at least one of following pieces of information: a service application level of the terminal device, a service quality level of the terminal device, a reason for the terminal device to set up the service, core network information for the terminal device to set up the service, and a service type of the service.

14. The terminal device according to claim 12 or claim 13, wherein the access suggestion information comprises at least one of following pieces of information:

information of a duration during which the terminal device is prohibited from accessing, information of a cell where the network device suggests the terminal device to reside, and information of a network that the network device suggests the terminal device to access.

15. The terminal device according to any one of claims 12-14, wherein the determining unit is specifically used for:

determining the access suggestion information corresponding to the access auxiliary information according to the access auxiliary information and a first mapping relationship, wherein the first mapping relationship is used for representing a correspondence between a plurality of pieces of access auxiliary information and a plurality of pieces of access suggestion information.

16. The terminal device according to claim 15, wherein the access response message comprises the first mapping relationship; or a broadcast message sent by the network device to the terminal device comprises the first mapping relationship; or the first mapping relationship is agreed in advance between the network device and the terminal device.

17. The terminal device according to any one of claims 12-16, wherein,
the access request message comprises an access preamble sequence or a scheduling request message; or

the access request message comprises a radio resource control (RRC) connection setup request message, and the access response message comprises an RRC connection rejection message; or

the access request message comprises an RRC connection setup completion message, and the access response message comprises an RRC connection release message; or

the access request message comprises a protocol data unit (PDU), and the access response message comprises a protocol data unit (PDU).