CLAIMS

1. A method for regulating communication parameters, comprising:

establishing, by first equipment, a communication with second equipment according to preset configurations of communication parameters;

regulating, by the first equipment, the configurations of one or more of the communication parameters according to a network state and/or service state in a communication process; and

sending, by the first equipment, communication parameter regulation indication information to the second equipment, the communication parameter regulation indication information indicating a result of regulation performed by the first equipment on the configurations of the one or more of the communication parameters;

wherein the communication parameters are multiple access manners for communication and/or basic physical layer parameters corresponding to the multiple access manners, and the communication parameters comprise one of a Cyclic Prefix length, a subcarrier spacing, an Orthogonal Frequency Division Multiplexing symbol length, and a reference signal density and image.

2. The method as claimed in claim 1, further comprising:

before regulating, by the first equipment, the configurations of one or more of the communication parameters, receiving, by the first equipment, processing capability indication information sent by the second equipment,

wherein regulating, by the first equipment, the configurations of one or more of the communication parameters according to a network state or service state in a communication process comprises: responsive to that the processing capability indication information indicates that the second equipment is capable of communicating with the first equipment by using a same parameter with different configurations, regulating, by the first equipment, the configurations of one or more of the communication parameters according to a network state or service state in a communication process.

3. The method as claimed in claim 2, wherein receiving the processing capability indication information sent by the second equipment comprises:

receiving an attach request message sent by the second equipment, the attach request message containing the processing capability indication information.

4. The method as claimed in any one of claims 1-3, further comprising:

determining, by the first equipment, the preset configurations of the communication parameters according to at least one of: condition of a wireless channel transmission between the first equipment and the second equipment, communication capabilities of the first equipment and the second equipment, and a service type for which the second equipment initiates random access; and

sending, by the first equipment, the preset configurations of the communication parameters to the second equipment.

5. The method as claimed in any one of claims 1-4, wherein regulating the configurations of the one or more of the communication parameters according to the network state and/or service state in the communication process comprises:

receiving from the second equipment parameter regulation request information for requesting regulation on the configurations of the one or more of the communication parameters and

regulating the one or more of the communication parameters according to the parameter regulation request information,

wherein the method further comprises:

sending, by the first equipment, Acknowledgement (ACK) information to the second equipment, the ACK information indicating an ACK of successful reception of the parameter regulation request information.

6. The method as claimed in any one of claims 1-4, wherein regulating the configurations of the one or more of the communication parameters according to the network state and/or service state in the communication process comprises:

receiving state information from the second equipment, the state information indicating the network state and/or the service state; and

regulating the configurations of the one or more of the communication parameters according to the state information.

7. The method as claimed in any one of claims 1-6, wherein the network state comprises at least one of a channel environment between the first equipment and the second equipment, a load and interference of a communication network where the first equipment and the second equipment are located, a requirement of an application on a data rate, and a requirement of the application on energy consumption.

8. A method for regulating communication parameters, comprising:

establishing, by second equipment, a communication with first equipment according to preset configurations of communication parameters; and

receiving, by the second equipment, communication parameter regulation indication information sent by the first equipment, the communication parameter regulation indication information indicating a result of regulation performed by the first equipment on the configurations of one or more of the communication parameters according to a network state and/or service state in a communication process;

wherein the communication parameters are multiple access manners for communication and/or basic physical layer parameters corresponding to the multiple access manners, and the communication parameters comprise one of a Cyclic Prefix length, a subcarrier spacing, an Orthogonal Frequency Division Multiplexing symbol length, and a reference signal density and image.

9. The method as claimed in claim 8, further comprising:

before receiving, by the second equipment, communication parameter regulation indication information sent by the first equipment, sending, by the second equipment, processing capability indication information to the first equipment, the processing capability indication information indicating that the second equipment is capable of communicating with the first equipment by using a same parameter with different configurations.

10. The method as claimed in claim 9, wherein sending the processing capability indication information to the first equipment comprises:

sending an attach request message to the first equipment, the attach request message comprising the processing capability indication information.

11. The method as claimed in any one of claims 8-10, further comprising:

receiving, by the second equipment, the preset configurations of the communication parameters from the first equipment, wherein the preset configurations of the communication parameters are determined by the first equipment according to at least one of: condition of a wireless channel transmission between the first equipment and the second equipment, communication capabilities of the first equipment and the second equipment, and a service type for which the second equipment initiates random access.

12. The method as claimed in any one of claims 8-11, further comprising:

sending parameter regulation request information for requesting regulation on the configurations of the one or more of the communication parameters to the first equipment to cause the first equipment to regulate the one or more of the communication parameters according to the parameter regulation request information; and

receiving Acknowledgement (ACK) information from the first equipment, the ACK information indicating an ACK of successful reception of the parameter regulation request information.

13. The method as claimed in any one of claims 8-11, further comprising:

sending state information, which indicates the network state and/or the service state, to the first equipment to enable the first equipment to regulate the configurations of the one or more of the communication parameters according to the state information.

14. The method as claimed in any one of claims 8-13, wherein receiving the communication parameter regulation indication information sent by the first equipment comprises:

receiving the parameter regulation indication information sent by the first equipment through a physical control channel.

15. The method as claimed in any one of claims 8-14, wherein the network state comprises at least one of a channel environment between the first equipment and the second equipment, a load and interference of a communication network where the first equipment and the second equipment are located, a requirement of an application on a data rate, and a requirement of the application on energy consumption.

16. The method as claimed in any one of claims 8-15, wherein the first equipment is network equipment, and the second equipment is terminal equipment; or,

the first equipment is a terminal equipment, and the second equipment is another terminal equipment.

17. An equipment for regulating communication parameters, comprising:

a processing module, configured to establish a communication with second equipment according to preset configurations of communication parameters,

wherein the processing module is further configured to regulate the configurations of one or more of the communication parameters according to a network state and/or service state in a communication process; and

a transceiver module, configured to send communication parameter regulation indication information to the second equipment, the communication parameter regulation indication information indicating a result of regulation performed by the equipment on the configurations of the one or more of the communication parameters;

wherein the communication parameters are multiple access manners for communication and/or basic physical layer parameters corresponding to the multiple access manners, and the communication parameters comprise one of a Cyclic Prefix length, a subcarrier spacing, an Orthogonal Frequency Division Multiplexing symbol length, and a reference signal density and image.

18. An equipment for regulating communication parameters, comprising:

a processing module, configured to establish a communication with first

equipment according to preset configurations of communication parameters; and

a transceiver module, configured to receive communication parameter regulation indication information sent by the first equipment, the communication parameter regulation indication information indicating a result of regulation performed by the processing module on the configurations of one or more of the communication parameters according to a network state and/or service state in a communication process;

wherein the communication parameters are multiple access manners for communication and/or basic physical layer parameters corresponding to the multiple access manners, and the communication parameters comprise one of a Cyclic Prefix length, a subcarrier spacing, an Orthogonal Frequency Division Multiplexing symbol length, and a reference signal density and image.