## CLAIMS

~~What is claimed is:~~

1. An access method, wherein the method comprises:

receiving, in a first cell, first information from a network device, wherein the first information comprises one or more of following information: ~~indicates~~ characteristic information of terminals allowed to access the first cell, characteristic information of terminals disallowed to access the first cell; and

determining, based on the first information, whether to access the first cell.

2. An access method, wherein the method comprises:

sending, in a first cell, first information to a terminal, wherein the first information comprises one or more of following information: characteristic information of terminals allowed to access the first cell, characteristic information of terminals disallowed to access the first cell.

~~2~~3. The method according to claim 1 or 2, wherein

the first information is carried in a system information block, SIB;

the first information is carried in a paging message; or

the first information is carried in downlink control information, DCI, and the DCI is used for scheduling a SIB.

~~3. The method according to claim 1 or 2, wherein~~

~~the first information comprises the characteristic information of terminals allowed to access the first cell; and/or~~

~~the first information comprises characteristic information of terminals disallowed to access the first cell.~~

4. The method according to any one of claims 1 to 3 ~~or 2~~, wherein the characteristic information corresponds to a type of terminals;

the first information comprises a type of terminals allowed to access the first cell; and/or

the first information comprises a type of terminals disallowed to access the first cell.

5. The method according to any one of claims 1 to 4, wherein the characteristic information comprises a value of one or more of the following parameters of terminals: a duplex capability, a branch quantity.

6. The method according to claim 5, wherein the duplex capability is half-duplex frequency

division duplex, FDD, capability.

~~5. The method according to claim 1 or 2, wherein~~

~~the first information comprises K bits, one of the K bits corresponds to one or more of M types, and when a value of the bit is T1, terminals allowed to access the first cell has the type corresponding to the bit, or when the value of the bit is T2 or is not T1, terminals disallowed to access the first cell has the type corresponding to the bit; and~~

~~K is an integer greater than or equal to 1, M is an integer greater than or equal to 1, T1 and T2 are integers, and T1 is different from T2.~~

~~6. The method according to claim 1 or 2, wherein the first information indicates N, and a type of terminals allowed to access the first cell comprises N of M types, or a type of terminals disallowed to access the first cell comprises N of M types; and~~

~~N is an integer greater than or equal to 1, and M is an integer greater than or equal to 1.~~

~~7. The method according to any one of claims 1 to 6, wherein the method further comprises:~~

~~receiving, in the first cell, second information from the network device, wherein the second information indicates characteristic information of terminals allowed to access a second cell, and the second cell is a neighboring cell of the first cell.~~

~~8. The method according to any one of claims 1 to 7, wherein the characteristic information comprises a value of one or more of the following parameters of terminals: a maximum bandwidth, a minimum bandwidth, an application scenario, a peak rate, a maximum modulation order, a duplex capability, a branch quantity, a supported power level, processing time, whether supplementary uplink SUL is supported, whether carrier aggregation CA is supported, and a CA capability.~~

~~9. An access method, wherein the method comprises:~~

~~sending, in a first cell, first information to a terminal, wherein the first information indicates characteristic information of terminals allowed to access the first cell.~~

~~10. The method according to claim 9, wherein~~

~~the first information is carried in a system information block SIB;~~

~~the first information is carried in a paging message; or~~

~~the first information is carried in downlink control information DCI, and the DCI is used for scheduling a SIB.~~

~~11. The method according to claim 9 or 10, wherein~~

~~the first information comprises the characteristic information of terminals allowed to access the first cell; and/or~~

~~the first information comprises characteristic information of terminals disallowed to access the first cell.~~

~~12. The method according to claim 9 or 10, wherein the characteristic information corresponds to a type of terminals;~~

~~the first information comprises a type of terminals allowed to access the first cell; and/or~~

~~the first information comprises a type of terminals disallowed to access the first cell.~~

~~13. The method according to claim 9 or 10, wherein~~

~~the first information comprises K bits, one of the K bits corresponds to one or more of M types, and when a value of the bit is T1, terminals allowed to access the first cell has the type corresponding to the bit, or when the value of the bit is T2 or is not T1, terminals disallowed to access the first cell has the type corresponding to the bit; and~~

~~K is an integer greater than or equal to 1, M is an integer greater than or equal to 1, T1 and T2 are integers, and T1 is different from T2.~~

~~14. The method according to claim 9 or 10, wherein the first information indicates N, and a type of terminals allowed to access the first cell comprises N of M types, or a type of terminals disallowed to access the first cell comprises N of M types; and~~

~~N is a positive integer greater than or equal to 1.~~

~~15. The method according to any one of claims 9 to 14, wherein the method further comprises:~~

~~sending, in the first cell, second information to the terminal, wherein the second information indicates characteristic information of terminals allowed to access a second cell, and the second cell is a neighboring cell of the first cell.~~

~~16. The method according to any one of claims 9 to 15, wherein the characteristic information comprises a value of one or more of the following parameters of terminals: a maximum bandwidth, a minimum bandwidth, an application scenario, a peak rate, a maximum modulation order, a duplex capability, a branch quantity, a supported power level, processing time, whether supplementary uplink SUL is supported, whether carrier aggregation CA is supported, and a CA capability.~~

~~17~~7. An access method, wherein the method comprises:

sending, in a first cell, third information to a first network device, wherein the third

information indicates characteristic information of a terminal; and

receiving, in the first cell, a response message from the first network device, wherein the response message indicates whether the terminal is allowed to access the first cell.

8. An access method, wherein the method comprises:

receiving, in a first cell, third information from a terminal, wherein the third information indicates characteristic information of the terminal; and

sending, in the first cell, a response message to the terminal based on the third information, wherein the response message indicates whether the terminal is allowed to access the first cell.

~~18~~9. The method according to claim ~~17~~7 or 8, wherein

the third information is carried in Msg3, and the response message is carried in Msg4 or carried in downlink control information, DCI, for scheduling Msg4; or

the third information is carried in MsgA, and the response message is carried in MsgB or carried in DCI for scheduling MsgB.

10. The method according to any one of claims 7 to 9, wherein the characteristic information comprises a value of one or more of the following parameters of the terminal: a duplex capability, a branch quantity.

11. The method according to claim 10, wherein the duplex capability is half-duplex frequency division duplex, FDD, capability.

~~19. An access method, wherein the method comprises:~~

~~sending, in a first cell, a preamble to a first network device, wherein a transmission resource for the preamble corresponds to characteristic information of a terminal, or a preamble set to which the preamble belongs corresponds to the characteristic information of the terminal; and~~

~~receiving, in the first cell, a response message from the first network device, wherein the response message indicates whether the terminal is allowed to access the first cell.~~

~~20. The method according to claim 19, wherein~~

~~the response message is carried in a second message Msg2, carried in downlink control information DCI for scheduling the second message Msg2, or carried in a random access response RAR.~~

~~21. The method according to any one of claims 17 to 20, wherein the method further comprises:~~

~~receiving, in the first cell, second information from the first network device, wherein the~~

second information indicates characteristic information of a terminal allowed to access a second cell, and the second cell is a neighboring cell of the first cell.

22. The method according to claim 21, wherein the method further comprises:

sending, in the second cell, an identifier of the terminal and cell information of the first cell to a second network device.

23. The method according to any one of claims 17 to 22, wherein the method further comprises:

receiving, in the first cell, indication information from the first network device; and

the sending, in a first cell, third information to a first network device comprises: sending the third information to the first network device based on the indication information.

24. The method according to any one of claims 17 to 23, wherein the characteristic information comprises a value of one or more of the following parameters of the terminal: a maximum bandwidth, a minimum bandwidth, an application scenario, a peak rate, a maximum modulation order, a duplex capability, a branch quantity, a supported power level, processing time, whether supplementary uplink SUL is supported, whether carrier aggregation CA is supported, and a CA capability.

25. An access method, wherein the method comprises:

receiving, in a first cell, third information from a terminal, wherein the third information indicates characteristic information of the terminal; and

sending, in the first cell, a response message to the terminal based on the third information, wherein the response message indicates whether the terminal is allowed to access the first cell.

26. The method according to claim 25, wherein

the third information is carried in Msg3, and the response message is carried in Msg4 or carried in downlink control information DCI for scheduling Msg4; or

the third information is carried in MsgA, and the response message is carried in MsgB or carried in DCI for scheduling MsgB.

27. An access method, wherein the method comprises:

receiving, in a first cell, a preamble from a terminal wherein a transmission resource for the preamble corresponds to characteristic information of the terminal, or a preamble set to which the preamble belongs corresponds to the characteristic information of the terminal; and

sending, in the first cell, a response message to the terminal based on the characteristic

information of the terminal, wherein the response message indicates whether the terminal is allowed to access the first cell.

28. The method according to claim 27, wherein

the response message is carried in a second message Msg2, carried in downlink control information DCI for scheduling the second message Msg2, or carried in a random access response RAR.

29. The method according to any one of claims 25 to 28, wherein the method further comprises:

sending, in the first cell, second information to the terminal, wherein the second information indicates characteristic information of a terminal allowed to access a second cell, and the second cell is a neighboring cell of the first cell.

30. The method according to any one of claims 25 to 29, wherein when the response message indicates to reject the terminal to access the first cell, the method further comprises:

sending an identifier of the terminal and cell information of the first cell to a second network device.

31. The method according to any one of claims 25 to 30, wherein before the receiving, in a first cell, third information from a terminal, the method further comprises:

sending, in the first cell, indication information to the terminal, wherein the indication information indicates types of parameters comprised in the characteristic information.

32. The method according to any one of claims 25 to 31, wherein the characteristic information comprises a value of one or more of the following parameters of the terminal: a maximum bandwidth, a minimum bandwidth, an application scenario, a peak rate, a maximum modulation order, a duplex capability, a branch quantity, a supported power level, processing time, whether supplementary uplink SUL is supported, whether carrier aggregation CA is supported, and a CA capability.

33. An access method, wherein the method comprises:

receiving an identifier of a terminal and cell information of a first cell that are from a first network device; and

receiving an identifier of the terminal and cell information of the first cell that are from the terminal.

34. A communication system, wherein the communication system comprises:

~~a network device, configured to send, in a first cell, first information to a terminal, wherein the first information indicates characteristic information of terminals allowed to access the first cell; and~~

~~the terminal, configured to: receive, in the first cell, the first information from the network device, and determine, based on the first information, whether to access the first cell.~~

~~35. A communication system, wherein the communication system comprises:~~

~~a terminal, configured to send, in a first cell, third information to a first network device, wherein the third information indicates characteristic information of the terminal; and~~

~~a network device, configured to: receive, in the first cell, the third information from the terminal, and send, in the first cell, a response message to the terminal based on the third information, wherein the response message indicates whether the terminal is allowed to access the first cell, and~~

~~the terminal is further configured to receive, in the first cell, the response message from the first network device.~~

~~36. A communication system, wherein the communication system comprises:~~

~~a terminal, configured to send, in a first cell, a preamble to a first network device, wherein a transmission resource for the preamble corresponds to characteristic information of the terminal, or a preamble set to which the preamble belongs corresponds to the characteristic information of the terminal; and~~

~~the first network device, configured to send, in the first cell, a response message to the terminal based on the characteristic information of the terminal, wherein the response message indicates whether the terminal is allowed to access the first cell, and~~

~~the terminal is further configured to receive, in the first cell, the response message from the first network device.~~

~~37~~12. A communication apparatus, configured to perform the access method according to any one of claims 1, and 3 to ~~8~~ 6 or the access method according to any one of claims ~~17~~ 7, and 9 to ~~24~~11.

~~38. A communication apparatus, comprising a processor and a memory, wherein the memory is coupled to the processor, and the processor is configured to perform the access method according to any one of claims 1 to 8 or the access method according to any one of claims 17 to 24.~~

~~39. A communication apparatus, comprising a processor and a communication interface,~~

~~wherein~~

~~the processor receives, in a first cell through the communication interface, first information from a network device, wherein the first information indicates characteristic information of terminals allowed to access the first cell; and~~

~~the processor is configured to determine, based on the first information, whether to access the first cell.~~

~~40. A communication apparatus, comprising a processor and a communication interface, wherein the processor uses the communication interface to:~~

~~send, in a first cell, third information to a first network device, wherein the third information indicates characteristic information of a terminal; and receive, in the first cell, a response message from the first network device, wherein the response message indicates whether the terminal is allowed to access the first cell; or~~

~~send, in a first cell, a preamble to a first network device, wherein a transmission resource for the preamble corresponds to characteristic information of a terminal, or a preamble set to which the preamble belongs corresponds to the characteristic information of the terminal; and receive, in the first cell, a response message from the first network device, wherein the response message indicates whether the terminal is allowed to access the first cell.~~

~~41~~13. A communication apparatus, configured to perform the access method according to any one of claims ~~9~~ 2 to ~~16~~6, or the access method according to any one of claims ~~25~~ 8 to ~~32~~11~~, or the access method according to claim 33~~.

~~42. A communication apparatus, wherein the communication apparatus comprises a processor and a memory, the memory is coupled to the processor, and the processor is configured to perform the access method according to any one of claims 9 to 16, the access method according to any one of claims 25 to 32, or the access method according to claim 33.~~

~~43. A communication apparatus, comprising a processor and a communication interface, wherein the processor sends, in a first cell, first information to a terminal through the communication interface, and the first information indicates characteristic information of terminals allowed to access the first cell.~~

~~44. A communication apparatus, comprising a processor and a communication interface, wherein~~

~~the processor receives, in a first cell, third information from a terminal through the~~

~~communication interface, wherein the third information indicates characteristic information of the terminal; and the processor is configured to send, in the first cell, a response message to the terminal based on the third information through the communication interface, wherein the response message indicates whether the terminal is allowed to access the first cell; or~~

~~the processor receives, in a first cell, a preamble from a terminal through the communication interface, wherein a transmission resource for the preamble corresponds to characteristic information of the terminal, or a preamble set to which the preamble belongs corresponds to the characteristic information of the terminal; and sends, in the first cell, a response message to the terminal based on the characteristic information of the terminal, wherein the response message indicates whether the terminal is allowed to access the first cell.~~

~~45. A communication apparatus, comprising a processor and a communication interface, wherein the processor uses the communication interface to:~~

~~receive an identifier of a terminal and cell information of a first cell that are from a first network device; and~~

~~receive an identifier of the terminal and cell information of the first cell that are from the terminal.~~

~~46~~14. A computer-readable storage medium, wherein the computer-readable storage medium stores computer instructions, and when the computer instructions are run on a computer, the computer is enabled to perform the access method according to any one of claims 1 to ~~33~~11.

~~47~~15. A computer program product, wherein the computer program product comprises computer instructions, and when the computer instructions are run on a computer, the computer is enabled to perform the access method according to any one of claims 1 to ~~33~~11.