CLAIMS

1. An initial access method, applied to a terminal and comprising:

receiving a configuration message sent by a network-side device, wherein the configuration message comprises a plurality of initial access resources, and the plurality of initial access resources are configured for different categories of terminals by the network-side device;

selecting, from the plurality of initial access resources, an initial access resource corresponding to a category of the terminal; and

performing an initial access operation based on the selected initial access resource;

wherein the terminal comprises a first-category terminal and a second-category terminal; and

in a case that the terminal selecting the initial access resource is a first-category terminal, the selecting, from the plurality of initial access resources, an initial access resource corresponding to a category of the terminal comprises:

selecting, based on an attribute of the first-category terminal, a corresponding initial access resource from the plurality of initial access resources, wherein the attribute of the first-category terminal comprises: capability of the first-category terminal;

wherein the capability of the first-category terminal comprises an antenna quantity capability equal to 2, or equal to 1;

wherein the configuration message is carried by a first system information block SIB and extended system information, wherein

the first SIB is a SIB corresponding to the second-category terminal;

wherein the extended system information comprises:

system information corresponding to the first-category terminal in a first SIB1, wherein the first SIB1 is a SIB in the first SIB.

2. The method according to claim 1, wherein the capability of the first-category terminal further comprises: a bandwidth capability of less than 100 MHz, or with a peak rate capability of less than 100 Mbps, or with a processing delay capability of less than

a preset time, or with a supported carrier quantity capability of less than a preset value, or with a transmit power capability of less than a preset value.

3. The method according to claim 1, wherein the attribute of the first-category terminal further comprises at least one of the following: capability set of the first-category terminal, feature of the first-category terminal, feature set of the first-category terminal, category of the first-category terminal, type of the first-category terminal, application scenario of the first-category terminal, and subscription information of the first-category terminal;

wherein in the case that the terminal selecting the initial access resource is a first-category terminal, the selecting, from the plurality of initial access resources, an initial access resource corresponding to a category of the terminal further comprises at least one of the following:

selecting, from the plurality of initial access resources, an initial access resource corresponding to the first-category terminal, wherein the initial access resource selected by the first-category terminal is different from an initial access resource selected by the second-category terminal;

selecting, according to a correspondence between identifiers of the first-category terminals and initial access resources, a corresponding initial access resource from the plurality of initial access resources;

selecting, based on a preset weight of the first-category terminal on a corresponding initial access resource, an initial access resource with a preset weight greater than a preset threshold from the plurality of initial access resources;

selecting, from the plurality of initial access resources, an initial access resource whose preset weight is greater than the preset threshold and that satisfies the correspondence; and

selecting, according to a correspondence between initial access resources and cell identifiers or public land mobile network PLMN identifiers of cells in which the first-category terminals are located, a corresponding initial access resource from the plurality of initial access resources.

4. The method according to claim 1, wherein the configuration message further comprises a first indication message, the first indication message is used to indicate a correspondence between the initial access resources and terminal categories, and the selecting an initial access resource from the plurality of initial access resources comprises:

selecting, according to the correspondence, an initial access resource corresponding to a category of the terminal.

5. The method according to claim 1, wherein the configuration message further comprises a second indication message, and the second indication message is used to indicate an initial access resource of the first-category terminal.

6. The method according to claim 1, wherein the configuration message further comprises a third indication message, and the third indication message is used to indicate an initial access operation to be performed by using an initial access resource of the first-category terminal.

7. The method according to claim 1, wherein the initial access operation comprises at least one of the following:

camping, receiving system information, monitoring a paging message, monitoring advance indication information, and random access.

8. The method according to claim 7, wherein in a case that a terminal selecting the initial access resource is a first-category terminal, the performing an initial access operation based on the selected initial access resource comprises:

receiving system information and monitoring a paging message based on a selected first initial access resource, and performing random access based on a selected second initial access resource; wherein the first initial access resource is the same as a resource used for receiving system information and monitoring a paging message by the second-category terminal, and the second initial access resource is different from a resource used for random access of the second-category terminal.

9. The method according to claim 7, wherein in a case that a terminal selecting the initial access resource is a first-category terminal, the performing an initial access operation based on the selected initial access resource comprises:

receiving system information based on a selected third initial access resource, and performing random access and monitoring a paging message based on a selected fourth initial access resource; wherein the third initial access resource is the same as a resource used for receiving system information by the second-category terminal, and the fourth initial access resource is different from a resource used for random access and monitoring a paging message by the second-category terminal.

10. The method according to any one of claims 1 to 9, wherein the initial access resource comprises at least one of the following:

a synchronization signal block SSB, a synchronization signal block based measurement timing configuration SMTC, a search space, a control resource set CORESET, an uplink bandwidth part BWP, a downlink bandwidth part BWP, and a reference signal RS.

11. The method according to any one of claims 1 to 9, wherein the configuration message is further carried by at least one of the following: a physical broadcast channel PBCH, a master information block MIB, and a dedicated RRC message.

12. The method according to claim 11, wherein the extended system information further comprises at least one of the following:

system information corresponding to the first-category terminal in a SIBx, wherein x is an integer greater than 1, the SIBx belongs to a second SIB, and the second SIB is a SIB corresponding to the first-category terminal; and

system information corresponding to the first-category terminal in a SIBy, wherein y is an integer greater than 1, the SIBy is a SIB in the first SIB.

13. An initial access method, applied to a network-side device and comprising:

configuring a plurality of initial access resources for different categories of terminals; and

sending a configuration message to the different categories of terminals, wherein the configuration message is used to indicate that the network-side device has configured a plurality of initial access resources for the different categories of terminals;

wherein the terminal comprises a first-category terminal and a second-category terminal;

and a capability of the first-category terminal comprises an antenna quantity capability equal to 2, or equal to 1;

wherein the configuration message is carried by a first system information block SIB and extended system information, wherein

the first SIB is a SIB corresponding to the second-category terminal;

wherein the extended system information comprises:

system information corresponding to the first-category terminal in a first SIB1, wherein the first SIB1 is a SIB in the first SIB.

14. The method according to claim 13, wherein the configuration message is further carried by at least one of the following: a physical broadcast channel PBCH, a master information block MIB, and a dedicated RRC message.

15. The method according to claim 14, wherein the extended system information further comprises at least one of the following:

system information corresponding to the first-category terminal in a SIBx, wherein x is an integer greater than 1, the SIBx belongs to a second SIB, and the second SIB is a SIB corresponding to the first-category terminal; and

system information corresponding to the first-category terminal in a SIBy, wherein y is an integer greater than 1, the SIBy is a SIB in the first SIB..

16. The method according to claim 15, wherein the system information corresponding to the first-category terminal in the first SIB1 is used to indicate any one of the following:

system information supporting the first-category terminal; and

system information allowing access or camping of the first-category terminal.

17. A terminal, comprising a processor, a memory, and a program or instructions stored in the memory and capable of running on the processor, wherein when the program or instructions are executed by the processor, the following steps are implemented:

receiving a configuration message sent by a network-side device, wherein the configuration message comprises a plurality of initial access resources, and the plurality

of initial access resources are configured for different categories of terminals by the network-side device;

selecting, from the plurality of initial access resources, an initial access resource corresponding to a category of the terminal; and

performing an initial access operation based on the selected initial access resource;

wherein the terminal comprises a first-category terminal and a second-category terminal;

in a case that the terminal selecting the initial access resource is a first-category terminal, the selecting, from the plurality of initial access resources, an initial access resource corresponding to a category of the terminal comprises:

selecting, based on an attribute of the first-category terminal, a corresponding initial access resource from the plurality of initial access resources, wherein the attribute of the first-category terminal comprises: capability of the first-category terminal;

wherein the capability of the first-category terminal comprises an antenna quantity capability equal to 2, or equal to 1;

wherein the configuration message is carried by a first system information block SIB and extended system information, wherein

the first SIB is a SIB corresponding to the second-category terminal;

wherein the extended system information comprises:

system information corresponding to the first-category terminal in a first SIB1, wherein the first SIB1 is a SIB in the first SIB.

18. The terminal according to claim 17, wherein the capability of the first-category terminal further comprises: a bandwidth capability of less than 100 MHz, or with a peak rate capability of less than 100 Mbps, or with a processing delay capability of less than a preset time, or with a supported carrier quantity capability of less than a preset value, or with a transmit power capability of less than a preset value.

19. The terminal according to claim 17, wherein the attribute of the first-category terminal further comprises at least one of the following: capability set of the first-category terminal, feature of the first-category terminal, feature set of the first-category terminal, category of the first-category terminal, type of the first-category terminal,

application scenario of the first-category terminal, and subscription information of the first-category terminal;

in the case that the terminal selecting the initial access resource is a first-category terminal, the selecting, from the plurality of initial access resources, an initial access resource corresponding to a category of the terminal further comprises at least one of the following:

selecting, from the plurality of initial access resources, an initial access resource corresponding to the first-category terminal, wherein the initial access resource selected by the first-category terminal is different from an initial access resource selected by the second-category terminal;

selecting, according to a correspondence between identifiers of the first-category terminals and initial access resources, a corresponding initial access resource from the plurality of initial access resources;

selecting, based on a preset weight of the first-category terminal on a corresponding initial access resource, an initial access resource with a preset weight greater than a preset threshold from the plurality of initial access resources;

selecting, from the plurality of initial access resources, an initial access resource whose preset weight is greater than the preset threshold and that satisfies the correspondence; and

selecting, according to a correspondence between initial access resources and cell identifiers or public land mobile network PLMN identifiers of cells in which the first-category terminals are located, a corresponding initial access resource from the plurality of initial access resources.

20. A network-side device, comprising a processor, a memory, and a program or instructions stored in the memory and capable of running on the processor, wherein when the program or instructions are executed by the processor, the steps of the initial access method according to any one of claims 13 to 16 are implemented.