CLAIMS

1. A communication method, characterized in that the method is applied to an access network device, wherein the access network device is a shared access network device of a first operator and a second operator, the access network device needs to interact with a core network of the second operator through a core network of the first operator that connectes to the access network device, and the method comprises:

broadcasting (S301) first information, wherein the first information indicates at least one public land mobile network identifier that the access network device supports for access of a terminal device, wherein

the at least one public land mobile network identifier that the access network device supports for access of a terminal device comprises a first public land mobile network identifier corresponding to the second operator and a third public land mobile network identifier corresponding to the first operator; and

the first public land mobile network identifier and the third public land mobile network identifier are supported by a first access and mobility management function of the first operator.

2. The method according to claim 1, wherein the method further comprises:

receiving (S302) a registration request message from a terminal device of the second operator, wherein the registration request message is used to request to access a network, the registration request message comprises second information, and the second information indicates that the terminal device of the second operator selects the first public land mobile network identifier; and

sending (S303) the registration request message to the first access and mobility management function.

3. The method according to claim 1 or 2, wherein the access network device directly connects to the core network of the first operator, and the access network device does not directly connect to the core network of the second operator.

4. The method according to any one of claims 1 to 3, wherein the first public land mobile network identifier is a public land mobile network identifier of the second operator.

5. The method according to any one of claims 1 to 3, wherein the first public land mobile network identifier is a public land mobile network identifier that is allocated by the first operator and that is used for access of the terminal device of the second operator.

6. The method according to any one of claims 1 to 5, wherein the second operator is any one of N operators, the N operators do not comprise the first operator, and N is a positive integer, and the N operators share the access network device with the first operator, a core network device of each of the N operators needs to interact with the access network device through the core network

device of the first operator.

7. The method according to any one of claims 1 to 6, wherein the at least one public land mobile network identifier that the access network device supports for access of a terminal device further comprises a second public land mobile network identifier used for access of a terminal device of a third operator, and the third operator and the first operator share the access network device, and the access network device interacts with a core network of the third operator through the core network of the first operator; and

the second public land mobile network identifier is supported by a second access and mobility management function of the first operator, or the second public land mobile network identifier is supported by the first access and mobility management function of the first operator.

8. The method according to any one of claims 1 to 7, wherein the first information is a broadcast public land mobile network, PLMN, list, and the broadcast PLMN list includes the third public land mobile network identifier and the first public land mobile network identifier.

9. A communication method, characterized in that the method is applied to a terminal device of a second operator, and the method comprises:

receiving (S301) first information broadcast by an access network device, wherein the first information indicates at least one public land mobile network identifier that the access network device supports for access of a terminal device, the access network device is a shared access network device of a first operator and the second operator, and the access network device needs to interact with a core network of the second operator through a core network of the first operator that connects to the access network device, wherein the at least one public land mobile network identifier that the access network device supports for access of a terminal device comprises a first public land mobile network identifier corresponding to the second operator and a third public land mobile network identifier corresponding to the first operator; and

selecting the first public land mobile network identifier for access.

10. The method according to claim 9, wherein the access network device directly connects to the core network of the first operator, and the access network device does not directly connect to the core network of the second operator.

11. The method according to claim 9 or 10, wherein the method further comprises:

sending (S302) a registration request message to the access network device, wherein the registration request message is used to request to access a network, the registration request message comprises second information, and the second information indicates that the terminal device of the second operator selects the first public land mobile network identifier.

12. A communication apparatus, comprising a processor, wherein the processor is coupled to a memory;

the memory is configured to store program instructions; and

the processor is configured to invoke the program instructions in the memory, to perform the method according to any one of claims 1 to 8 or claims 9 to 11.

13. A computer-readable medium, wherein the computer-readable medium stores program code to be executed by a computer, and the program code comprises instructions used to perform the method according to any one of claims 1 to 8 or claims 9 to 11.

14. A computer program product, wherein the computer program product comprises computer program code, and when the computer program code is run on a computer, the computer is enabled to implement the method according to any one of claims 1 to 8 or claims 9 to 11.

15. A communication system, comprising an access network device, and a first access and mobility management function of a first operator, wherein the access network device is a shared access network device of the first operator and a second operator, the access network device needs to interact with a core network of the second operator through a core network of the first operator that connectes to the access network device, and the access network device is configured to perform the method according to any one of claims 1 to 8.