CLAIMS

1. A communication control apparatus, which controls an authentication device provided at a mobile terminal and used for authenticating identity of a mobile user, so that the mobile terminal selects different operator networks for communications, the communication control apparatus is provided at the mobile terminal, and the communication control apparatus comprising:

a first acquiring unit configured to acquire identification information of the authentication device;

a first authenticating unit configured to transmit the identification information to a server, so that the server authenticates identity of the authentication device;

a second acquiring unit configured to acquire a session key and attribute setting information encrypted by the session key from the server when an identity authentication performed by the server is successful; and

a first transmitting unit configured to transmit to the authentication device the session key and the attribute setting information encrypted by the session key, so that the authentication device obtains the attribute setting information by decrypting, and sets operator attributes of the authentication device according to the attribute setting information;

wherein, the attribute setting information has at least an international mobile subscriber identification number (IMSI) and a key identifier (Ki),

wherein, the communication control apparatus interacts data with the server by connecting to the Internet,

wherein, the communication control apparatus further comprises:

a handover controlling unit configured to receive a notification that the authentication device successfully sets the operator attributes, and selects an operator attribute according to a received handover instruction when the number of the operator attributes is more than two, so that the mobile terminal is handed over to a network corresponding to the selected operator attribute for communications.

2. The communication control apparatus according to claim 1, wherein,

the communication control apparatus is provided at the mobile terminal.

3. The communication control apparatus according to claim 1, wherein the communication control apparatus further comprises:

a deletion controlling unit configured to control the authentication device according to a received deletion instruction to delete the operator attributes.

4. An authentication device, which is provided at a mobile terminal and used for authenticating identity of a mobile user, so that the mobile terminal performs communications in a network, the authentication device comprising:

a third acquiring unit configured to communicate with a communication control apparatus provided at the mobile terminal, and acquire, via the communication control apparatus, a session key issued by a server and attribute setting information encrypted by the session key;

a decrypting unit configured to decrypt the attribute setting information encrypted by the session key according to a decryption algorithm and the session key, so as to obtain the attribute setting information; and

a setting unit configured to set operator attributes of the authentication device according to the attribute setting information;

wherein, the attribute setting information has at least an international mobile subscriber identification number (IMSI) and a key identifier (Ki),

wherein, the communication control apparatus interacts data with the server by connecting to the Internet,

wherein, the authentication device further comprises:

a notifying unit configured to transmit notification information after the setting unit successfully sets the operator attributes.

5. The authentication device according to claim 4, wherein the authentication device further comprises:

a storing unit configured to store the attribute setting information, an encryption algorithm and the decryption algorithm.

6. The authentication device according to claim 4, wherein,

the authentication device is a subscriber identity module (SIM) card, a chip jointed with the subscriber identity module card, or a device built in the mobile terminal and having the same function as the subscriber identity module card.

7. A central control apparatus, provided in a server, the central control apparatus comprising:

a first receiving unit configured to communicate with a communication control apparatus provided at a mobile terminal, so as to receive identification information of an authentication device provided at the mobile terminal and used for authenticating identity of a mobile user;

a second authenticating unit configured to authenticate identity of the authentication device according to the identification information and encryption information, and set up a session key when the authentication is successful; and

a second transmitting unit configured to transmit to the communication control apparatus of the mobile terminal the session key and attribute setting information encrypted by the session key, so that the communication control apparatus transmits to the authentication device the session key and attribute setting information encrypted by the session key, and the authentication device obtains the attribute setting information by decrypting and sets operator attributes of the authentication device according to the attribute setting information;

wherein, the attribute setting information has at least an international mobile subscriber identification number (IMSI) and a key identifier (Ki),

wherein, the communication control apparatus interacts data with the server by connecting to the Internet,

wherein, the central control apparatus further comprises:

a managing unit configured to manage the attribute setting information.