CLAIMS

What is claimed is:

1. A method for controlling a LAN service, performed by~~applied to~~ a network~~third~~ communications device and comprising:

obtaining LAN-service-related information related to a terminal, wherein the LAN-service-related information comprises at least one of the following: a LAN service capability of the terminal, location information of the terminal, LAN service subscription information, ~~and~~ or LAN service request information; and

performing a first related operation of a LAN service based on the LAN-service-related information;

wherein the LAN service is a private communication service provided on a communications network for a group of terminals;

wherein the first related operation of the LAN service comprises configuring LAN-related route selection policy information for the terminal;

wherein the LAN-related route selection policy information comprises at least one of the following:

data network name DNN information of a LAN associated with an application; or

slice information of the LAN associated with the application.

2. The method for controlling a LAN service according to claim 1, wherein the first related operation of the LAN service further comprises at least one of the following:

configuring LAN-service-related configuration information for the terminal;

configuring LAN-service-relay-related configuration information for the terminal;

~~configuring LAN-related route selection policy information for the terminal;~~

transmitting the LAN-service-related configuration information;

transmitting the LAN-service-relay-related configuration information;

transmitting the LAN-related route selection policy information;

transmitting LAN-related information of a LAN that the terminal is allowed to join; ~~and~~or

transmitting LAN-related information of a LAN that the terminal is not allowed to join.

3. The method for controlling a LAN service according to claim 2, wherein the LAN-service-related configuration information comprises at least one of the following:

information about whether the LAN service is allowed;

service scope information of the LAN service;

LAN-related information of a LAN allowed to join;

LAN-related information of a LAN not allowed to join;

information of a DNN supporting the LAN service; ~~and~~or

information of a slice supporting the LAN service.

4. The method for controlling a LAN service according to claim 2, wherein the LAN-service-relay-related configuration information comprises at least one of the following:

information about whether serving as a LAN service relay is allowed;

service scope information of the LAN service relay;

LAN-relay-related information of a LAN that allows relaying;

LAN-relay-related information of a LAN that does not allow relaying;

LAN-related information of the LAN that allows relaying; or~~and~~

LAN-related information of the LAN that does not allow relaying.

5. The method for controlling a LAN service according to claim 2, wherein the LAN-related route selection policy information further comprises at least one of the following:

whether an application is allowed to access the LAN service;

LAN-related information of a LAN that the application is allowed to access; or

LAN-related information of a LAN that the application is not allowed to access~~;~~

~~data network name DNN information of a LAN associated with the application; and~~

~~slice information of the LAN associated with the application~~.

6. A method for controlling a LAN service, performed by~~applied to~~ a terminal and comprising:

obtaining first information, wherein the first information comprises ~~at least one of the following: LAN-service-related configuration information, LAN-service-relay-related configuration information, and~~ LAN-related route selection policy information; and

performing a second related operation of a LAN service based on the first information;

wherein the LAN service is a private communication service provided on a communications network for a group of terminals;

wherein the LAN-related route selection policy information comprises at least one of the following:

data network name DNN information of a LAN associated with the application; or

slice information of the LAN associated with the application;

wherein the second related operation of the LAN service comprises at least one of the following:

joining a LAN;

leaving the LAN;

performing one-to-one communication within the LAN;

performing one-to-many communication within the LAN; or

providing a relay service for a communications device within the LAN.

7. The method for controlling a LAN service according to claim 6, wherein the first information further comprises at least one of the following: LAN-service-related configuration information, or LAN-service-relay-related configuration information.

~~7~~8. The method for controlling a LAN service according to claim 6, wherein the LAN-service-related configuration information comprises at least one of the following:

information about whether the LAN service is allowed;

service scope information of the LAN service;

LAN-related information of a LAN allowed to join;

LAN-related information of a LAN not allowed to join;

information of a DNN supporting the LAN service; ~~and~~or

information of a slice supporting the LAN service.

~~8~~9. The method for controlling a LAN service according to claim ~~7~~8, wherein the LAN-related information comprises at least one of the following:

LAN identification information;

whether multicast is allowed;

communication address information for multicast in a LAN;

communication address information of the terminal in the LAN;

service scope information of the LAN;

information of a communications device within the LAN;

information of a DNN supporting the LAN; ~~and~~or

information of a slice supporting the LAN.

~~9~~10. The method for controlling a LAN service according to claim ~~8~~9, wherein the LAN identification information comprises at least one of the following:

a LAN identifier at an application layer;

a LAN identifier in a communications network; ~~and~~or

a LAN identifier at a transport layer.

~~10~~11. The method for controlling a LAN service according to claim ~~8~~9, wherein the communication address information comprises at least one of the following: a port, a media access control MAC address, an IP address, ~~and~~ or information of a virtual private communications network VLAN; and/or

the information of the communications device within the LAN comprises communication address information of the communications device within the LAN.

~~11~~12. The method for controlling a LAN service according to claim ~~6~~7, wherein the LAN-service-relay-related configuration information comprises at least one of the following:

information about whether serving as a LAN service relay is allowed;

service scope information of the LAN service relay;

LAN-relay-related information of a LAN that allows relaying;

LAN-relay-related information of a LAN that does not allow relaying;

LAN-related information of the LAN that allows relaying; ~~and~~or

LAN-related information of the LAN that does not allow relaying.

~~12~~13. The method for controlling a LAN service according to claim ~~11~~12, wherein the LAN-relay-related information comprises at least one of the following:

LAN identification information;

whether multicast is allowed;

communication address information for multicast in a LAN;

communication address information of the terminal in the LAN;

service scope information of the LAN;

information of a communications device within the LAN;

communication address information of the terminal serving as a relay in the LAN;

service scope information of a LAN relay; ~~and~~or

information of a communications device that the LAN relay is allowed to access.

~~13~~14. The method for controlling a LAN service according to claim 6, wherein the LAN-related route selection policy information further comprises at least one of the following:

whether an application is allowed to access the LAN service;

LAN-related information of a LAN that the application is allowed to access; or

LAN-related information of a LAN that the application is not allowed to access~~;~~

~~DNN information of a LAN associated with the application; and~~

~~slice information of the LAN associated with the application~~.

~~14. The method for controlling a LAN service according to claim 6, wherein the second related operation of the LAN service comprises at least one of the following:~~

~~joining a LAN;~~

~~leaving the LAN;~~

~~performing one-to-one communication within the LAN;~~

~~performing one-to-many communication within the LAN; and~~

~~providing a relay service for a communications device within the LAN.~~

15. The method for controlling a LAN service according to claim ~~14~~6, wherein the

providing a relay service for a communications device within the LAN comprises at least one of the following:

adding, to a data packet of the relayed communications device, information of a VLAN corresponding to the LAN;

transmitting a request for joining the LAN for the relayed communications device; ~~and~~or

transmitting a request for leaving the LAN for the relayed communications device.

16. A network~~third~~ communications device, comprising:

an obtaining module, configured to obtain LAN-service-related information related to a terminal, wherein the LAN-service-related information comprises at least one of the following: a LAN service capability of the terminal, location information of the terminal, LAN service subscription information, ~~and~~ or LAN service request information; and

an execution module, configured to perform a first related operation of a LAN service based on the LAN-service-related information;

wherein the LAN service is a private communication service provided on a communications network for a group of terminals;

wherein the first related operation of the LAN service comprises configuring LAN-related route selection policy information for the terminal;

wherein the LAN-related route selection policy information comprises at least one of the following:

data network name DNN information of a LAN associated with an application; or

slice information of the LAN associated with the application.

17. The network~~third~~ communications device according to claim 16, wherein the first related operation of the LAN service further comprises at least one of the following:

configuring LAN-service-related configuration information for the terminal;

configuring LAN-service-relay-related configuration information for the terminal;

~~configuring LAN-related route selection policy information for the terminal;~~

transmitting the LAN-service-related configuration information;

transmitting the LAN-service-relay-related configuration information;

transmitting the LAN-related route selection policy information;

transmitting LAN-related information of a LAN that the terminal is allowed to join; ~~and~~or

transmitting LAN-related information of a LAN that the terminal is not allowed to join.

18. The network~~third~~ communications device according to claim 17, wherein the LAN-service-related configuration information comprises at least one of the following:

information about whether the LAN service is allowed;

service scope information of the LAN service;

LAN-related information of a LAN allowed to join;

LAN-related information of a LAN not allowed to join;

information of a DNN supporting the LAN service; ~~and~~or

information of a slice supporting the LAN service.

19. The network~~third~~ communications device according to claim 17, wherein the LAN-service-relay-related configuration information comprises at least one of the following:

information about whether serving as a LAN service relay is allowed;

service scope information of the LAN service relay;

LAN-relay-related information of a LAN that allows relaying;

LAN-relay-related information of a LAN that does not allow relaying;

LAN-related information of the LAN that allows relaying; ~~and~~or

LAN-related information of the LAN that does not allow relaying.

20. A terminal, comprising:

an obtaining module, configured to obtain first information, wherein the first information comprises ~~at least one of the following: LAN-service-related configuration information, LAN-service-relay-related configuration information, and~~ LAN-related route selection policy information; and

an execution module, configured to perform a second related operation of a LAN service based on the first information;

wherein the LAN service is a private communication service provided on a communications network for a group of terminals;

wherein the LAN-related route selection policy information comprises at least one of the following:

data network name DNN information of a LAN associated with the application; or

slice information of the LAN associated with the application;

wherein the second related operation of the LAN service comprises at least one of the following:

joining a LAN;

leaving the LAN;

performing one-to-one communication within the LAN;

performing one-to-many communication within the LAN; or

providing a relay service for a communications device within the LAN.