CLAIMS

1. A method for location service control, applied to a first communications unit including a terminal and comprising:

transmitting control information and information related to a first valid time to a second communications unit, wherein the control information is used to control related behavior of obtaining location of the terminal;

the second communications unit comprises a radio access network (RAN) network element, a core network (CN) network element, a location service client, or an application function (AF);

the information related to the first valid time comprises: information related to a valid time for the control information;

the information related to the first valid time comprises at least one of the following: time period information for the control information and valid duration for the control information, wherein the time period information for the control information is used to indicate a valid time period for the control information;

the time period information for the control information comprises at least one of the following: a start-of-validity time for the control information, an end-of-validity time for the control information, and a loss-of-validity time for the control information;

the control information comprises at least one of the following:

first indication information, wherein the first indication information indicates at least one of the following: whether related behavior of obtaining location of the terminal is allowed, whether subsequent related behavior of obtaining location of the terminal is allowed by the terminal, whether a subsequent location service request specific to the terminal is allowed, that a subsequent location service request specific to the terminal is allowed, and that a subsequent location service request specific to the terminal is not allowed; and

second indication information, wherein the second indication information indicates at least one of the following: whether the first indication information is applicable to all location service clients; information related to a location service client to which the control information is applicable; and information related to a location service client for which the control information is not applicable.

2. The method according to claim 1, wherein the control information is

control information per terminal.

3. The method according to claim 1, wherein

the control information further comprises control information per location service client, and the control information per location service client comprises at least one of the following:

information related to a location service client;

third indication information, wherein the third indication information indicates at least one of the following: whether a subsequent location service request specific to the terminal is allowed, wherein the location service request comes from the location service client.

4. The method according to claim 1, wherein the controlling related behavior of obtaining location of a terminal comprises at least one of the following:

whether a location service request for the terminal is allowed;

whether a location service request for the terminal is allowed, wherein the location service request comes from a location service client;

whether to transmit to the terminal a privacy verification request in response to a location service request;

whether to obtain the location of the terminal;

whether to trigger the terminal to perform location measurement; and

whether to transmit an obtained location of the terminal to the location service client.

5. A method for location service control, applied to a second communications unit including a radio access network (RAN) network element, a core network (CN) network element, a location service client, or an application function (AF), and comprising:

receiving control information and information related to a first valid time from a first communications unit including a terminal, wherein the control information is used to control related behavior of obtaining location of the terminal; and

performing, based on information related to the first valid time and the control information, a location service related operation;

wherein the information related to the first valid time comprises: information related to a valid time for the control information;

wherein the information related to the first valid time comprises at least one of the following: time period information for the control information and valid duration for the control information, wherein the time period information for the control information is used to indicate a valid time period for the control information;

wherein the time period information for the control information comprises at least one of the following: a start-of-validity time for the control information, an end-of-validity time for the control information, and a loss-of-validity time for the control information;

wherein the control information comprises at least one of the following:

first indication information, wherein the first indication information indicates at least one of the following: whether related behavior of obtaining location of the terminal is allowed, whether subsequent related behavior of obtaining location of the terminal is allowed by the terminal, whether a subsequent location service request specific to the terminal is allowed, that a subsequent location service request specific to the terminal is allowed, and that a subsequent location service request specific to the terminal is not allowed; and

second indication information, wherein the second indication information indicates at least one of the following: whether the first indication information is applicable to all location service clients; information related to a location service client to which the control information is applicable; and information related to a location service client for which the control information is not applicable.

6. The method according to claim 5, wherein the location service related operation comprises at least one of the following:

transmitting the information related to the first valid time and the control information to another communication network element and/or location service client;

storing the information related to the first valid time and the control information;

starting a timer based on the information related to the first valid time;

determining a valid time period for the control information based on the information related to the first valid time;

during the valid time period for the control information, controlling, based on the control information, related behavior of obtaining location of the terminal;

deleting the control information when a valid time for the control information expires or a loss-of-validity time arrives; and

controlling related behavior of obtaining location of the terminal.

7. A first communications unit including a terminal, comprising:

a transmitting module, configured to transmit control information and information related to a first valid time, wherein the control information is used to control related behavior of obtaining location of the terminal;

the second communications unit comprises a radio access network (RAN) network element, a core network (CN) network element, a location service client, or an application function (AF);

the information related to the first valid time comprises: information related to a valid time for the control information;

the information related to the first valid time comprises at least one of the following: time

period information for the control information and valid duration for the control information, wherein the time period information for the control information is used to indicate a valid time period for the control information;

the time period information for the control information comprises at least one of the following: a start-of-validity time for the control information, an end-of-validity time for the control information, and a loss-of-validity time for the control information;

the control information comprises at least one of the following:

first indication information, wherein the first indication information indicates at least one of the following: whether related behavior of obtaining location of the terminal is allowed, whether subsequent related behavior of obtaining location of the terminal is allowed by the terminal, whether a subsequent location service request specific to the terminal is allowed, that a subsequent location service request specific to the terminal is allowed, and that a subsequent location service request specific to the terminal is not allowed; and

second indication information, wherein the second indication information indicates at least one of the following: whether the first indication information is applicable to all location service clients; information related to a location service client to which the control information is applicable; and information related to a location service client for which the control information is not applicable.

8. The first communications unit according to claim 7, wherein the control information is

control information per terminal.

9. The first communications unit according to claim 7, wherein the control information further comprises control information per location service client, and the control information per location service client comprises at least one of the following:

information related to a location service client;

third indication information, wherein the third indication information indicates at least one of the following: whether a subsequent location service request specific to the terminal is allowed, wherein the location service request comes from the location service client.

10. The first communications unit according to claim 7, wherein the controlling related behavior of obtaining location of a terminal comprises at least one of the following:

whether a location service request for the terminal is allowed;

whether a location service request for the terminal is allowed, wherein the location service request comes from a location service client;

whether to transmit to the terminal a privacy verification request in response to a location service request;

whether to obtain the location of the terminal;

whether to trigger the terminal to perform location measurement; and

whether to transmit an obtained location of the terminal to the location service client.

11. A second communications unit including a radio access network (RAN) network element, a core network (CN) network element, a location service client, or an application function (AF), characterized by the second communications unit, comprising:

a receiving module, configured to receive control information and information related to a first valid time from a first communications unit including a terminal, wherein the control information is used to control related behavior of obtaining location of the terminal; and

an execution module, configured to perform, based on the information related to the first valid time and the control information, a location service related operation;

wherein the information related to the first valid time comprises: information related to a valid time for the control information;

wherein the information related to the first valid time comprises at least one of the following: time period information for the control information and valid duration for the control information, wherein the time period information for the control information is used to indicate a valid time period for the control information;

wherein the time period information for the control information comprises at least one of the following: a start-of-validity time for the control information, an end-of-validity time for the control information, and a loss-of-validity time for the control information;

wherein the control information comprises at least one of the following:

first indication information, wherein the first indication information indicates at least one of the following: whether related behavior of obtaining location of the terminal is allowed, whether subsequent related behavior of obtaining location of the terminal is allowed by the terminal, whether a subsequent location service request specific to the terminal is allowed, that a subsequent location service request specific to the terminal is allowed, and that a subsequent location service request specific to the terminal is not allowed; and

second indication information, wherein the second indication information indicates at least one of the following: whether the first indication information is applicable to all location service clients; information related to a location service client to which the control information is applicable; and information related to a location service client for which the control information is not applicable.

12. The second communications unit according to claim 11, wherein the location service related operation comprises at least one of the following:

transmitting the information related to the first valid time and the control information to another communication network element and/or location service client;

storing the information related to the first valid time and the control information;

starting a timer based on the information related to the first valid time;

determining a valid time period for the control information based on the information related to the first valid time;

during the valid time period for the control information, controlling, based on the control information, related behavior of obtaining location of the terminal;

deleting the control information when a valid time for the control information expires or a loss-of-validity time arrives; and

controlling related behavior of obtaining location of the terminal.

13. A communications unit, comprising a processor, a memory, and a program stored in the memory and capable of running on the processor, wherein when the program is executed by the processor, the steps of the method for location service control according to any one of claims 1 to 4 are implemented, or the steps of the method for location service control according to any one of claims 5 to 6 are implemented.

14. A computer-readable storage medium, wherein a program is stored in the computer-readable storage medium, and when the program is executed by a processor, the steps of the method for location service control according to any one of claims 1 to 4 are implemented, or the steps of the method for location service control according to any one of claims 5 to 6 are implemented.