

CLAIMS

1. A positioning method, comprising:

receiving, by a terminal device, a first message from a location management network element by using a session, wherein the first message is used to request location information of the terminal device;

sending, by the terminal device, the first message to an access network device;

receiving, by the terminal device, the location information from the access network device;

and

sending, by the terminal device, the location information of the terminal device to the location management network element by using the session.

2. The method according to claim 1, wherein the location information comprises a positioning reference signal and/or a sounding reference signal, and the location information is used to calculate a location of the terminal device.

3. The method according to claim 1 or 2, wherein a positioning protocol between the location management network element and the access network device is used for the first message.

4. The method according to claim 3, wherein the positioning protocol is NRPPa.

5. The method according to any one of claims 1 to 4, wherein the first message comprises a correlation identifier of the terminal device and information indicating the positioning method.

6. The method according to claim 5, wherein the positioning method comprises: measuring, by the access network device, a radio signal sent by the terminal device, and reporting the location information of the terminal device to the location management network element.

7. A positioning method, comprising:

receiving, by an access network device, a first message from a terminal device by using a session, wherein the first message is used to request location information of the terminal device; and

sending, by the access network device, the location information to the terminal device based on the first message by using the session.

8. The method according to claim 7, wherein the location information comprises a positioning reference signal and/or a sounding reference signal, and the location information is used to calculate a location of the terminal device.

9. The method according to any one of claims 7 to 8, wherein the sending, by the access network device, the location information of the terminal device to the terminal device based on the first message by using the session comprises:

determining, by the access network device, the location information of the terminal device based on the first message; and

sending, by the access network device, the location information of the terminal device to the terminal device by using the session.

10. A positioning method, comprising:

receiving, by an access network device, indication information from a session management network element, wherein the indication information indicates that a session is related to a positioning service;

receiving, by the access network device, a first message from a location management network element based on the indication information by using the session, wherein the first message is used to request location information of a terminal device; and

sending, by the access network device, the location information of the terminal device to the location management network element based on the first message by using the session.

11. The method according to claim 10, wherein the location information comprises a positioning reference signal and/or a sounding reference signal, and the location information is used to calculate a location of the terminal device.

12. The method according to any one of claims 10 to 11, wherein the receiving, by the access network device, a first message from a location management network element based on the indication information by using the session comprises:

determining, by the access network device based on the indication information, that the session is related to the positioning service; and

receiving, by the access network device, the first message from the location management network element by using the session.

13. A positioning method, comprising:

sending, by a location management network element, a first message to an access network device by using a session, wherein the first message is used to request location information of a terminal device;

receiving, by the location management network element, the location information of the

terminal device from the access network device by using the session; and

determining, by the location management network element, a location of the terminal device based on the location information of the terminal device.

14. The method according to claim 13, wherein the sending, by a location management network element, a first message to an access network device by using a session comprises:

sending, by the location management network element, the first message to the access network device through the terminal device by using the session; and

the receiving, by the location management network element, the location information of the terminal device from the access network device by using the session comprises:

receiving, by the location management network element, the location information of the terminal device from the access network device through the terminal device by using the session.

15. A communication apparatus, comprising:

a processor, wherein a memory is coupled to the processor, the memory is configured to store program instructions, and the processor is configured to execute the program instructions to implement the method according to any one of claims 1 to 14.

16. A communication system, comprising an access network device configured to perform the method according to any one of claims 10 to 12, and a location management network element configured to perform the method according to any one of claims 13 to 14.