

CLAIMS

1. A method for transmitting a radio capability identifier, applicable to a terminal device, wherein the terminal device supports radio capability signaling optimization RACS, the method comprising:

sending a currently available first radio capability identifier of a terminal device to a network node, in a case that a network node change-related condition is satisfied;

wherein the network node change-related condition comprises:

a security mode command received from a first network node carries a UE radio capability identifier request information element, wherein the security mode command is sent by the first network node in a case that the terminal device supports RACS and a second network node does not support RACS;

wherein the sending a currently available first radio capability identifier of a terminal device to a network node comprises: sending the currently available first radio capability identifier of the terminal device to the first network node in a security mode complete message;

after the sending a currently available first radio capability identifier of a terminal device to a network node, the method further comprises: receiving a second radio capability identifier sent by the network node;

wherein the second radio capability identifier matches a current radio capability of the terminal device;

wherein a condition for determining that the second network node does not support RACS comprises:

a radio capability identifier of the terminal device is not contained in a context, wherein the context is a context of the terminal device acquired from the second network node;

wherein the first network node is a network node after the terminal device moves and the second network node is a network node before the terminal device moves; and

wherein the first network node comprises a mobility management entity MME.

2. The method according to claim 1, wherein the network node change-related condition further comprises at least one of the following:

the terminal device moves out of a current tracking area list;

the terminal device performs an inter-system change;

the terminal device selects a new public land mobile network PLMN;

a configuration update command message received by the terminal device from the first

network node carries a registration request bit with a value of 1; or

the terminal device initiates a registration update process.

3. The method according to claim 1, wherein the receiving a second radio capability identifier sent by the network node comprises:

receiving the second radio capability identifier sent by the first network node in a second message,

wherein the second message comprises a tracking area update TAU accept message.

4. The method according to claim 1, wherein the second radio capability identifier is a radio capability identifier acquired by querying a UE capability management function UCMF node.

5. The method according to claim 1, wherein the receiving a second radio capability identifier sent by the network node comprises:

receiving the second radio capability identifier sent by the network node, in a case that the first radio capability identifier does not match the current radio capability of the terminal device.

6. A method for transmitting a radio capability identifier, applicable to a first network node, wherein the first network node comprises a mobility management entity MME, and the first network node supports RACS, the method comprising:

in a case that a terminal device supports RACS and a second network node does not support RACS, sending a security mode command carrying a UE radio capability identifier request information element to the terminal device, receiving a fourth radio capability identifier sent by the terminal device in a security mode complete message, and sending a third radio capability identifier to the terminal device,

wherein the third radio capability identifier matches a current radio capability of the terminal device;

wherein a condition for determining that the second network node does not support RACS comprises:

a radio capability identifier of the terminal device is not contained in a context, wherein the context is a context of the terminal device acquired from the second network node;

wherein the first network node is a network node after the terminal device moves and the second network node is a network node before the terminal device moves.

7. The method according to claim 6, wherein the sending a third radio capability identifier to a terminal device comprises:

sending the third radio capability identifier to the terminal device in a third message,

wherein the third message comprises a tracking area update TAU accept message.

8. The method according to claim 6, wherein the third radio capability identifier is a radio capability identifier acquired by querying a UE capability management function UCMF node.

9. The method according to claim 8, wherein the sending a third radio capability identifier to the terminal device comprises:

sending the third radio capability identifier to the terminal device, if the fourth radio capability identifier does not match the current radio capability of the terminal device.

10. A terminal device, wherein the terminal device supports radio capability signaling optimization RACS, the terminal device comprising:

a sending module, configured to send a currently available first radio capability identifier of a terminal device to a network node in a case that a network node change-related condition is satisfied;

wherein the network node change-related condition comprises:

a security mode command received from a first network node carries a UE radio capability identifier request information element, wherein the security mode command is sent by the first network node in a case that the terminal device supports RACS and a second network node does not support RACS;

wherein the sending module is further configured to send the currently available first radio capability identifier of the terminal device to the first network node in a security mode complete message;

wherein the terminal device further comprises a receiving module, configured to: receive a second radio capability identifier sent by the network node after the currently available first radio capability identifier of the terminal device is sent by the sending module to the network node;

wherein the second radio capability identifier matches a current radio capability of the terminal device;

wherein a condition for determining that the second network node does not support RACS comprises:

a radio capability identifier of the terminal device is not contained in a context, wherein the context is a context of the terminal device acquired from the second network node;

wherein the first network node is a network node after the terminal moves and the second network node is a network node before the terminal moves; and

wherein the first network node comprises a mobility management entity MME.

11. The terminal device according to claim 10, wherein the network node change-related condition further comprises at least one of the following:

the terminal device moves out of a current tracking area list;

the terminal device performs an inter-system change;

the terminal device selects a new public land mobile network PLMN;

a configuration update command message received by the terminal device from the first network node carries a registration request bit with a value of 1; or

the terminal device initiates a location update process, wherein the location update process comprises a registration update process or a tracking area update process.

12. The terminal device according to claim 10, wherein the receiving module is further configured to:

receiving the second radio capability identifier sent by the first network node in a second message,

wherein the second message comprises a tracking area update TAU accept message.

13. The terminal device according to claim 10, wherein the second radio capability identifier is a radio capability identifier acquired by querying a UE capability management function UCMF node.

14. The terminal device according to claim 10, wherein the receiving module is further configured to:

receive the second radio capability identifier sent by the network node, in a case that the first radio capability identifier does not match the current radio capability of the terminal device.

15. A first network node, wherein the first network node comprises a mobility management entity MME, and the first network node supports RACS, the first network node comprising:

a first sending module, configured to send, in a case that a terminal device supports RACS and a second network node does not support RACS, a security mode command carrying a UE radio capability identifier request information element to the terminal device;

a first receiving module, configured to receive a fourth radio capability identifier sent by the terminal device in a security mode complete message;

wherein the first sending module is further configured to send a third radio capability identifier to the terminal device,

wherein the third radio capability identifier matches a current radio capability of the terminal device;

wherein a condition for determining that the second network node does not support RACS comprises:

a radio capability identifier of the terminal device is not contained in a context, wherein the context is a context of the terminal device acquired from the second network node;

wherein the first network node is a network node after the terminal moves and the second network node is a network node before the terminal moves.

16. The first network node according to claim 15, wherein the first sending module is further configured to:

send the third radio capability identifier to the terminal device in a third message, wherein the third message comprises a tracking area update TAU accept message.

17. The first network node according to claim 15, wherein the third radio capability identifier is a radio capability identifier acquired by querying a UE capability management function UCMF node.

18. The first network node according to claim 17, wherein the first sending module is further configured to:

send the third radio capability identifier to the terminal device, if the fourth radio capability identifier does not match the current radio capability of the terminal device.

19. A computer-readable storage medium, storing a computer program, wherein the computer program, when executed by a processor, implements the steps of the method for transmitting a radio capability identifier according to any one of claims 1 to 5 or implements the steps of the method for transmitting a radio capability identifier according to any one of claims 6 to 9.