CLAIMS

1. A communication method in an inter-station layer 1/layer 2 triggered mobility LTM switching scenario, wherein the method is applied to a first access network device or a chip in the first access network device, and the method comprises:

in a switching preparation process, receiving a container from each of a plurality of candidate access network devices, wherein the container of the access network device comprises a parameter for a terminal to switch to the access network device;

sending a radio resource control RRC reconfiguration message to the terminal, wherein the RRC reconfiguration message comprises the container constructed by each of the plurality of candidate access network devices; and

when the terminal needs to switch to a second access network device in the plurality of candidate access network devices, sending a first media access control MAC layer message to the terminal, wherein the first MAC layer message comprises information for triggering the terminal to switch to the second access network device and information indicating a first next hop chaining counter NCC, and the first NCC is for determining a key for communication between the terminal and the second access network device.

2. The method according to claim 1, wherein sending the MAC layer message to the terminal comprises:

transferring, by an RRC layer of the first access network device to a MAC layer of the first access network device, the information indicating the first NCC; and

sending, by the MAC layer of the first access network device, the MAC layer message to the terminal.

3. The method according to claim 1 or 2, wherein the method further comprises:

receiving the first NCC from a mobility management network element, wherein

the first NCC is carried in an initial context setup request message or a path switch response message.

4. The method according to any one of claims 1 to 3, wherein the method further comprises:

sending a first candidate access network device list to the second access network device, wherein the first candidate access network device list comprises an identifier of at least one of the plurality of candidate access network devices.

5. The method of any one of claims 1 to 4, wherein the information indicating the first NCC comprises at least one of the following:

the first NCC;

an index value of the first NCC; and

a ciphertext obtained through encryption of the first NCC.

6. A communication method in an inter-station layer 1/layer 2 triggered mobility LTM switching scenario, wherein the method is applied to a second access network device or a chip in the second access network device, and the method comprises:

in a switching preparation process, receiving a handover request message from a first access network device, and sending a container of the second access network device to the first access network device, wherein the container comprises a parameter for a terminal to switch to the second access network device;

after the terminal switches from the first access network device to the second access network device, determining that the terminal needs to switch to a third access network device in at least one candidate access network device; and

sending a second MAC layer message to the terminal, wherein the second MAC layer message comprises information for triggering the terminal to switch to the third access network device and information indicating a second NCC, and the second NCC is for determining a key for communication between the terminal and the third access network device.

7. The method according to claim 6, wherein sending the second MAC layer message to the terminal comprises:

transferring, by an RRC layer of the second access network device to a MAC layer of the second access network device, the information indicating the second NCC; and

sending, by the MAC layer of the second access network device, the second MAC layer message to the terminal.

8. The method according to claim 6 or 7, wherein after the terminal switches to the second access network device, the method further comprises:

sending a path switch request message to a mobility management network element; and

receiving a path switch response message from the mobility management network element, wherein the path switch response message comprises the second NCC and a next hop NH corresponding to the second NCC.

9. The method according to claim 8, wherein after determining that the terminal needs to switch to the third access network device, the method further comprises:

determining, based on the NH corresponding to the second NCC, the key for communication between the third access network device and the terminal; and

sending, to the third access network device, the key for communication between the third access network device and the terminal.

10. The method according to claim 9, wherein the handover request message comprises a first NCC, and the container comprises the first NCC;

the sending the key to the third access network device comprises: sending an Xn message to the third access network device, wherein the Xn message comprises the key and the second NCC differet from the first NCC.

11. The method according to claim 8, wherein the method further comprises:

sending a third MAC layer message to the terminal, wherein the third MAC layer message comprises the information indicating the second NCC, and the second NCC is for determining a key for communication between the terminal and the second access network device; and

determining, based on the NH corresponding to the second NCC, the key for communication between the terminal and the second access network device.

12. The method according to any one of claims 6 to 11, wherein after sending the container of the second access network device to the terminal, the method further comprises: receiving a first candidate access network device list from the first access network device, wherein the first candidate access network device list comprises an identifier of the at least one candidate access network device; and

sending the second MAC layer message to the terminal comprises: if it is determined that the third access network device belongs to the first candidate access network device list, sending the second MAC layer message to the terminal.

13. The method according to any one of claims 6 to 12, wherein after determining that the terminal needs to switch to the third access network device in the at least one candidate access network device, the method further comprises:

sending a second candidate access network device list to the third access network device, wherein the second candidate access network device list comprises an identifier of a part or all of the at least one candidate access network device.

14. A communication method in an inter-station layer 1/layer 2 triggered mobility LTM switching scenario, wherein the method is applied to a terminal or a chip in the terminal, and the method comprises:

in a switching preparation process, receiving a container from each of a plurality of candidate access network devices, wherein the container of the access network device comprises a parameter for the terminal to switch to the access network device, and the plurality of candidate access network devices comprise a second access network device;

receiving a first MAC layer message from a first access network device, wherein the first MAC layer message comprises information for triggering the terminal to switch to the second access network device and information indicating a first NCC;

switching to the second access network device based on a parameter in a container of the second access network device; and

determining, based on the first NCC, a key for communication between the terminal and the second access network device.

15. The method according to claim 14, wherein determining, based on the first NCC, the key for communication between the terminal and the second access network device comprises:

when the first NCC is the same as an NCC stored in the terminal, deriving, based on a first input parameter, the key for communication between the terminal and the second access network device, wherein the first input parameter comprises a key KgNB corresponding to the first NCC and information about a cell of the second access network device.

16. The method according to claim 14 or 15, wherein determining, based on the first NCC, the key for communication between the terminal and the second access network device comprises:

transferring, by a MAC layer of the terminal to an RRC layer of the terminal, the information indicating the first NCC; and

determining, by the RRC layer of the terminal based on the first NCC, the key for communication between the terminal and the second access network device.

17. The method according to any one of claims 14 to 16, wherein the plurality of candidate access network devices further comprise a third access network device; and

after switching, by the terminal, to the second access network device, the method further comprises:

receiving a second MAC layer message from the second access network device, wherein the second MAC layer message comprises information for triggering the terminal to switch to the third access network device and information indicating a second NCC;

switching to the third access network device based on a parameter in a container of the third access network device; and

determining, based on the second NCC, a key for communication between the terminal and the third access network device.

18. The method according to claim 16, wherein the second NCC and the first NCC are different.

19. The method according to claim 17 or 18, wherein determining, based on the second NCC, the key for communication between the terminal and the third access network device comprises:

when the second NCC is different from an NCC stored in the terminal, deriving, based on a second input parameter, the key for communication between the terminal and the third access network device, wherein the second input parameter comprises an NH corresponding to the second NCC and information about a cell of the third access network device.

20. The method according to any one of claims 17 to 19, wherein the method further comprises:

when the second NCC is different from an NCC stored in the terminal, updating the NCC stored in the terminal to the second NCC.

21. A communication system, wherein the communication system comprises a first access network device and a second access network device, the first access network device is configured to perform the method according to any one of claims 1 to 5, and the second access network device is configured to perform the method according to any one of claims 6 to 13.

22. The system according to claim 21, wherein the communication system further comprises a terminal, and the terminal is configured to perform the method according to any one of claims 14 to 20.

23. A communication apparatus, comprising one or more functional modules configured to perform the method according to any one of claims 1 to 20.

24. A communication apparatus, comprising a processor, wherein the processor is coupled to a memory, the memory stores a computer program, and the processor is configured to invoke a part or all of the computer program in the memory, to cause the method according to any one of claims 1 to 20 to be performed.

25. A computer-readable storage medium, wherein the storage medium stores a computer program; and when a part or all of the computer program is executed by a computer, the method according to any one of claims 1 to 20 is caused to be performed.

26. A computer program product, wherein when a computer reads and executes the computer program product, the method according to any one of claims 1 to 20 is caused to be performed.

27. A communication method, comprising the method according to any one of claims 1 to 5, and the method according to any one of claims 6 to 13.

28. The method according to claim 27, further comprises:

the method according to any one of claims 14 to 20.