CLAIMS

What is claimed is:

1. A state indication method, wherein the method comprises:

receiving, by a relay core network device, first state indication information transmitted by a first device, wherein the first state indication information comprises at least one of first indication information and second indication information, the first indication information indicates that relay user equipment UE is performing UE-to-network relay communication, and the second indication information indicates that the relay UE is performing UE-to-network relay communication for an emergency service, wherein

the first state indication information is used for determining that a release procedure of a non-access stratum NAS signaling connection of the relay UE is not to be initiated.

2. The method according to claim 1, wherein the first device is the relay UE or an access network device of the relay UE; and

before the receiving, by a relay core network device, first state indication information transmitted by a first device, the method further comprises:

transmitting, by the relay core network device, a release request message to the first device, wherein the release request message is used to request to release a NAS signaling connection of the relay UE.

3. The method according to claim 1, wherein the first device is the relay UE or an access network device of the relay UE; and

after the receiving, by a relay core network device, first state indication information transmitted by a first device, the method further comprises:

storing, by the relay core network device, the first state indication information into a context of the relay UE.

4. The method according to claim 3, wherein the first device is the access network device of the relay UE; and

before the storing, by the relay core network device, the first state indication information into a context of the relay UE, the method further comprises:

receiving, by the relay core network device, identifier information of the relay UE that is transmitted by the access network device.

5. The method according to claim 1, wherein the first device is a remote core network device; and

the method further comprises:

receiving, by the relay core network device, identifier information of the relay UE and identifier information of remote UE that are transmitted by the remote core network device; and

storing, by the relay core network device, the first state indication information and the identifier information of the remote UE into the context of the relay UE.

6. The method according to claim 1, wherein the first device is the relay UE or an access network device of the relay UE; and

after the receiving, by a relay core network device, first state indication information transmitted by a first device, the method further comprises:

receiving, by the relay core network device, second state indication information transmitted by the first device, wherein the second state indication information is used for determining that the restriction of not initiating a release procedure of a NAS signaling connection of the relay UE is to be removed; and

deleting, by the relay core network device, the first state indication information from the context of the relay UE according to the second state indication information.

7. The method according to claim 6, wherein the second state indication information comprises at least one of third indication information and fourth indication information, wherein

the third indication information indicates that the relay UE has completed the UE-to-network relay communication, or indicates that a connection for the UE-to-network relay communication has been released; and

the fourth indication information indicates that the relay UE has completed the UE-to-network relay communication for the emergency service, or indicates that a

connection for the UE-to-network relay communication for the emergency service has been released.

8. The method according to claim 1, wherein the first device is a remote core network device; and

after the receiving, by a relay core network device, first state indication information transmitted by a first device, the method further comprises:

receiving, by the relay core network device, third state indication information transmitted by the first device, wherein the third state indication information is used for determining whether the restriction of not initiating a release procedure of a NAS signaling connection of the relay UE is to be removed;

deleting, by the relay core network device, first state indication information corresponding to first remote UE from the context of the relay UE according to the third state indication information; and

if the context of the relay UE further comprises first state indication information corresponding to other remote UE, determining not to remove the restriction of not initiating a release procedure of a NAS signaling connection of the relay UE; or

if the context of the relay UE does not comprise first state indication information corresponding to other remote UE, determining to remove the restriction of not initiating a release procedure of a NAS signaling connection of the relay UE.

9. The method according to claim 8, wherein the third state indication information comprises at least one of fifth indication information and sixth indication information, wherein

the fifth indication information indicates that the relay UE and the first remote UE have completed UE-to-network relay communication, or indicates that a connection for UE-to-network relay communication between the relay UE and the first remote UE has been released; and

the sixth indication information indicates that the relay UE and the first remote UE have completed UE-to-network relay communication for an emergency service, or indicates that a connection for UE-to-network relay communication for an emergency service between the relay UE and the first remote UE has been released.

10. A state indication method, wherein the method comprises:

transmitting, by a first device, first state indication information to a relay core network device, wherein the first state indication information comprises at least one of first indication information and second indication information, the first indication information indicates that relay user equipment UE is performing UE-to-network relay communication, and the second indication information indicates that the relay UE is performing UE-to-network relay communication for an emergency service, wherein

the first state indication information is used for determining that a release procedure of a non-access stratum NAS signaling connection of the relay UE is not to be initiated.

11. The method according to claim 10, wherein the first device is the relay UE or an access network device of the relay UE; and

before the transmitting, by a first device, first state indication information to a relay core network device, the method further comprises:

receiving, by first device, a release request message transmitted by the relay core network device, wherein the release request message is used to request to release a NAS signaling connection of the relay UE, wherein

the first state indication information comprises the second indication information.

12. The method according to claim 10, wherein the first device is a remote core network device; and

before the transmitting, by a first device, first state indication information to a relay core network device, the method further comprises:

receiving, by a remote core network device, first state indication information and identifier information of the relay UE that are transmitted by remote UE; and

transmitting, by the remote core network device, the identifier information of the relay UE and identifier information of the remote UE to the relay core network device.

13. The method according to claim 10, wherein the first device is the relay UE or an access network device of the relay UE; and

after the transmitting, by a first device, first state indication information to a relay core network device, the method further comprises:

transmitting, by the first device, second state indication information to the relay core network device, wherein the second state indication information is used for determining that the restriction of not initiating a release procedure of a NAS signaling connection of the relay UE is to be removed.

14. The method according to claim 13, wherein the second state indication information comprises at least one of third indication information and fourth indication information, wherein

the third indication information indicates that the relay UE has completed the UE-to-network relay communication, or indicates that a connection for the UE-to-network relay communication has been released; and

the fourth indication information indicates that the relay UE has completed the UE-to-network relay communication for the emergency service, or indicates that a connection for the UE-to-network relay communication for the emergency service has been released.

15. The method according to claim 10, wherein the first device is a remote core network device; and

after the transmitting, by a first device, first state indication information to a relay core network device, the method further comprises:

transmitting, by the remote core network device, third state indication information to the relay core network device, wherein the third state indication information is used for determining whether the restriction of not initiating a release procedure of a NAS signaling connection of the relay UE is to be removed.

16. The method according to claim 15, wherein the third state indication information comprises at least one of fifth indication information and sixth indication information, wherein

the fifth indication information indicates that the relay UE and first remote UE have completed UE-to-network relay communication, or indicates that a connection for UE-to-network relay communication between the relay UE and the first remote UE has been released; and

the sixth indication information indicates that the relay UE and the first remote UE have completed UE-to-network relay communication for an emergency service, or indicates that a connection for UE-to-network relay communication for an emergency service between the relay UE and the first remote UE has been released.

17. A core network device, wherein the core network device is a relay core network device, and the core network device comprises a receiving module, wherein

the receiving module is configured to receive first state indication information transmitted by a first device, wherein the first state indication information comprises at least one of first indication information and second indication information, the first indication information indicates that relay user equipment UE is performing UE-to-network relay communication, and the second indication information indicates that the relay UE is performing UE-to-network relay communication for an emergency service, wherein

the first state indication information is used for determining that a release procedure of a non-access stratum NAS signaling connection of the relay UE is not to be initiated.

18. A device, wherein the device is a first device, and the first device comprises a transmitting unit, wherein

the transmitting unit is configured to transmit first state indication information to a relay core network device, wherein the first state indication information comprises at least one of first indication information and second indication information, the first indication information indicates that relay user equipment UE is performing UE-to-network relay communication, and the second indication information indicates that the relay UE is performing UE-to-network relay communication for an emergency service, wherein

the first state indication information is used for determining that a release procedure of a non-access stratum NAS signaling connection of the relay UE is not to be initiated.

19. A core network device, comprising a processor, a memory, and a program or instructions stored in the memory and capable of running on the processor, wherein

when the program or instructions are executed by the processor, the steps of the state indication method according to any one of claims 1 to 9 are implemented.

20. A device, comprising a processor, a memory, and a program or instructions stored in the memory and capable of running on the processor, wherein when the program or instructions are executed by the processor, the steps of the state indication method according to any one of claims 10 to 16 are implemented.