METHOD AND APPARATUS FOR HANDING OVER RELAY USER EQUIPMENT, AND DEVICE AND READABLE STORAGE MEDIUM

TECHNICAL FIELD

[0001] The disclosure relates to the field of wireless communication technologies, and in particular, to a method and a device for handing over a relay user equipment (UE), a communication device, and a readable storage medium.

BACKGROUND

[0002] In related arts, in order to support direct communication between user equipment (UEs), sidelink communication is introduced. The sidelink may support following three transmission modes: unicast, multicast, and broadcast.

[0003] When two UEs perform the sidelink communication, one of the UEs may not be directly connected to the base station, but through another UE that may be used as a relay to realize connection and communication with the base station. The UE providing the relay function is relay UE and the UE connected to the base station through the relay UE is remote UE. The relay UE communicates with the remote UE through the sidelink.

SUMMARY

[0004] In view of this, embodiments of the disclosure provide a method and a device for handing over a relay user equipment (UE), a communication device, and a readable storage medium.

[0005] According to a first aspect of embodiments of the disclosure, a method for handing over a relay UE is provided. The method is performed by a remote UE. The method includes:

[0006] determining whether to hand over to a target relay UE based on a serving cell of the target relay UE.

[0007] In an embodiment, the determining whether to hand over to the target relay UE based on the serving cell of the target relay UE includes:

[0008] determining whether the serving cell of the target relay UE meets a handover condition in response to a trigger condition for a handover to the target relay UE being met; and

[0009] performing the handover to the target relay UE, in response to the handover condition being met.

WHAT IS CLAIMED IS:

1. A method for handing over a relay user equipment (UE), performed by a remote UE, comprising:

determining whether to hand over to a target relay UE based on a serving cell of the target relay UE.

2. The method of claim 1, wherein determining whether to hand over to the target relay UE based on the serving cell of the target relay UE comprises:

determining whether the serving cell of the target relay UE meets a handover condition in response to a trigger condition for a handover to the target relay UE being met; and

performing the handover to the target relay UE, in response to the handover condition being met.

3. The method of claim 2, further comprising:

not performing the handover to the target relay UE, in response to the handover condition not being met.

4. The method of claim 2 or 3, wherein the trigger condition for the handover to the target relay UE comprises at least one of:

receiving, from a base station, a handover command for instructing the remote UE to perform the handover to the target relay UE; or

determining, based on a parameter of a sidelink between the remote UE and the target relay UE, that a preset condition for handing over to the target replay UE is met; wherein the preset condition is received from the base station.

5. The method of claim 4, wherein,

the parameter of the sidelink between the remote UE and the target relay UE comprises: channel quality of the sidelink between the remote UE and the target relay UE; and

the preset condition for handing over to the target relay UE comprises:

the channel quality of the sidelink between the remote UE and the target relay UE being greater than a preset threshold.

6. The method of any one of claims 2 to 5, wherein,

the serving cell of the target relay UE meeting the handover condition comprises at least one of:

the serving cell of the target relay UE being same as a serving cell of the remote UE;

the serving cell of the target relay UE being same as a reported serving cell of the target relay UE that has been reported by the remote UE to a base station; or

the serving cell of the target relay UE belonging to a cell list.

7. The method of claim 6, further comprising:

receiving the cell list from the base station, wherein the cell list corresponds to the target relay UE.

8. The method of any one of claims 4 to 7, further comprising one of:

sending, to the base station, information for indicating that the remote UE does not hand over to the target relay UE;

initiating reestablishment of a radio resource control link to the target relay UE;

triggering a re-establishment request of the radio resource control link;

deleting the handover command corresponding to the target relay UE;

deleting the preset condition for handing over to the target relay UE; or

deleting the handover command corresponding to the target relay UE and the preset condition for handing over to the target relay UE.

9. The method of claim 8, after sending, to the base station, the information for indicating that the remote UE does not hand over to the target relay UE, further comprising:

receiving, from the base station, another handover command for instructing to hand over to a relay UE other than the target relay UE.

10. A method for handing over a relay user equipment (UE), performed by a network device, comprising:

receiving, from a remote UE, information for indicating that a target relay UE is not handed over to.

11. The method of claim 10, wherein,

the information for indicating that the target relay UE is not handed over to is determined by the remote UE based on a serving cell of the target relay UE.

12. The method of claim 10 or 11, wherein,

the information for indicating that the target relay UE is not handed over to is determined by the remote UE based on a determination that the serving cell of the target relay UE does not meet a handover condition in response to a trigger condition for a handover to the target relay UE being met.

13. The method of any one of claims 10 to 12, further comprising:

sending a cell list to the remote UE; wherein the cell list is used for enabling the remote UE to determine that the serving cell of the target relay UE meets the handover condition in response to the serving cell of the target relay UE belonging to the cell list and perform the

handover to the target relay UE.

14. The method of any one of claims 10 to 13, further comprising:

sending a handover command for instructing the remote UE to hand over to the target relay UE.

15. A communication device, comprising:

a processor; and

a memory, for storing processor-executable instructions;

wherein, the processor is configured to execute the executable instructions stored in the memory to perform the method of any one of claims 1 to 9.

16. A communication device, comprising:

a processor; and

a memory, for storing processor-executable instructions;

wherein, the processor is configured to execute the executable instructions stored in the memory to perform the method of any one of claims 10 to 14.

17. A non-transitory computer-readable storage medium, having executable instructions stored thereon stored, wherein, when the executable instructions are executed by a processor, the method for handing over a relay user equipment (UE) of any one of claims 1 to 9 is performed.

18. A non-transitory computer-readable storage medium, having executable instructions stored thereon stored, wherein, when the executable instructions are executed by a processor, the method for handing over a relay user equipment (UE) of any one of claims 10 to 14 is performed.