

CLAIMS

What is claimed is:

1. A communication method, comprising:

selecting or re-selecting, by an apparatus at a terminal device side, to a second cell from a first cell; and

5 initiating, by the apparatus, a registration procedure under conditions of: the first cell and the second cell are in a tracking area ID list for the apparatus, the apparatus selects or re-selects from the first cell to the second cell, the apparatus is in inactive mode in the first cell and radio access technologies of the first cell and the second cell are different, wherein the registration procedure is for Non-Access Stratum, NAS, signaling connection recovery between the apparatus and a core network.

10 2. The method according to claim 1, wherein

the initiating, by the apparatus, a registration procedure comprises: receiving, by a non-access stratum of the apparatus, indication information from an access stratum of the apparatus, wherein the indication information indicates that the apparatus has performed inter-radio access technology cell selection or re-selection; and initiating, by the apparatus, the registration procedure in response to the indication information.

15 3. The method according to claim 1 or 2, wherein

the registration procedure comprises an initial registration procedure or a mobility and periodic registration update procedure.

4. The method according to any one of claims 1 to 3, wherein

the radio access technology of the first cell comprises new radio or evolved universal terrestrial radio access.

20 5. The method according to any one of claims 1 to 4, wherein

the first cell and the second cell are connected to a same 5G core network device.

6. The method according to any one of claims 1 to 5, wherein

the initiating, by the apparatus, a registration procedure comprises: sending, by the apparatus, first indication information, wherein the first indication information is used to notify a network device to switch the apparatus to an

25 idle mode; or

the method further comprises: switching, by the apparatus, to an idle mode; and

the initiating, by the apparatus, a registration procedure comprises: sending, by the apparatus, first indication information, wherein the first indication information is used to notify a network device that the apparatus is in idle mode.

30 7. The method according to claim 6, wherein

the initiating, by the apparatus, a registration procedure comprises: sending, by the apparatus, a registration request message, wherein the registration request message is used to initiate the registration procedure, and the registration request message comprises the first indication information.

8. The method according to claim 6 or 7, further comprising:

5 notifying, by the access stratum of the apparatus, the non-access stratum of the apparatus to send the first indication information.

9. The method according to claim 8, wherein

the notifying, by the access stratum of the apparatus, the non-access stratum of the apparatus to send the first indication information comprises: notifying, by the access stratum of the apparatus by using a cause value, the non-
10 access stratum of the apparatus to send the first indication information, wherein the cause value refers to the radio access technologies of the first cell and the second cell are different.

10. The method according to claim 6 or 7, wherein the sending, by the apparatus, first indication information comprises:

sending, by the non-access stratum of the apparatus, the first indication information based on information about
15 the second cell that is received by the access stratum of the apparatus, wherein the information about the second cell comprises at least one of the following:

identification information of the second cell, identification information of a public land mobile network supported by the second cell, or information about the radio access technology of the second cell.

11. The method according to claim 10, further comprising:

20 receiving, by the access stratum, system information of the second cell, wherein the system information comprises the information about the second cell; and

notifying, by the access stratum, the non-access stratum of the received information about the second cell.

12. The method according to any one of claims 6 to 11, wherein

the network device comprises an access network device or a core network device, and the core network device
25 comprises an access and mobility management function entity.

13. The method according to claim 11, wherein

sending the first indication information in the registration procedure comprises: sending the first indication information to the access and mobility management function entity.

14. A communications apparatus, comprising:

30 a processing module, configured to enable the communications apparatus to select or re-select to a second cell from a first cell; and

the processing module, configured to initiate a registration procedure under conditions of: the first cell and the second cell are in a tracking area ID list for the communications apparatus, the communications apparatus selects or re-selects from the first cell to the second cell, the communications apparatus is in inactive mode in the first cell and radio access technologies of the first cell and the second cell are different, wherein the registration procedure is for Non-Access Stratum, NAS, signaling connection recovery between the communications apparatus and a core network.

15. The communications apparatus according to claim 14, wherein

the processing module, configured to initiate a registration procedure comprises: a non-access stratum of the communications apparatus receives indication information from an access stratum of the communications apparatus, wherein the indication information indicates that the communications apparatus has performed inter-radio access technology cell selection or re-selection; and the processing module, configured to initiate the registration procedure in response to the indication information.

16. The apparatus according to claim 14 or 15, wherein

the registration procedure comprises an initial registration procedure or a mobility and periodic registration update procedure.

17. The apparatus according to any one of claims 14 to 16, wherein the communications apparatus further comprising:

a transceiver module, the transceiver module is configured to send first indication information in the registration procedure, wherein the first indication information is used to notify a network device that the communications apparatus is in idle mode; or

the processing module is configured to switch the communications apparatus to an idle mode, and the transceiver module is configured to send first indication information in the registration procedure, wherein the first indication information is used to notify a network device to switch the communications apparatus to the idle mode.

18. The apparatus according to claim 17, wherein

the transceiver module is configured to send a registration request message, the registration request message is used to initiate the registration procedure, the registration request message comprises the first indication information.

19. The apparatus according to claim 17 or 18, wherein

the access stratum of the communications apparatus is configured to notify the non-access stratum of the communications apparatus to send the first indication information.

20. The apparatus according to claim 19, wherein

that the access stratum of the communications apparatus is configured to notify the non-access stratum of the communications apparatus to send the first indication information comprises: the access stratum of the

communications apparatus is configured to notify, by using a cause value, the non-access stratum of the communications apparatus to send the first indication information, wherein the cause value refers to the radio access technologies of the first cell and the second cell are different.

21. The apparatus according to claim 19, wherein

that the access stratum of the communications apparatus is configured to notify the non-access stratum of the communications apparatus to send the first indication information comprises: the non-access stratum is configured to send the first indication information based on information about the second cell that is received by the access stratum, wherein the information about the second cell comprises at least one of the following:

identification information of the second cell, identification information of a public land mobile network supported by the second cell, or information about the radio access technology of the second cell.

22. The apparatus according to claim 21, wherein

the access stratum of the communications apparatus is configured to receive system information of the second cell, wherein the system information comprises the information about the second cell; and

the access stratum is configured to notify the non-access stratum of the received information about the second cell.

23. The apparatus according to claim 17, wherein

the network device comprises an access network device or a core network device, and the core network device comprises an access and mobility management function entity.

24. The apparatus according to claim 23, wherein

that the transceiver module is configured to send first indication information in the registration procedure comprises: the transceiver module is configured to send the first indication information to the access and mobility management function entity.

25. The apparatus according to any one of claims 15 to 24, wherein

the radio access technology of the first cell comprises new radio or evolved universal terrestrial radio access.

26. The apparatus according to any one of claims 14 to 25, wherein

the first cell and the second cell are connected to a same 5G core network device.

27. A communications apparatus, comprising:

a transceiver and a processor, wherein the transceiver is configured to execute instructions for receiving and sending information; and when the instructions are run by the processor, the communications apparatus is enabled to perform the method according to any one of claims 1 to 13.

28. A computer-readable storage medium, wherein

the computer-readable storage medium stores instructions, and the instructions are executed by a processor to perform the method according to any one of claims 1 to 13.

29. A communications apparatus, comprising a memory and a processor, wherein the memory is configured to store instructions, and the processor is configured to: execute the instructions stored in the memory, and perform the method according to any one of claims 1 to 13 based on the instructions stored in the memory.

30. A communications system, comprising the communications apparatus according to any one of claims 14 to 26.

31. A computer program product, wherein storing instructions, wherein when the instructions are executed, the method according to any one of claims 1 to 13 is implemented.