

CLAIMS

1. A communication method, wherein the method comprises:

obtaining first information, wherein the first information is used to change a state of a main communication module of a terminal device, and the terminal device comprises the main communication module and a secondary communication module; and

switching the main communication module from a first state to a second state based on the first information, wherein the first state comprises: the main communication module is in an idle state, an inactive state, and a connected state.

2. The method according to claim 1, wherein the first information comprises a first condition, the first condition is used to evaluate quality of a first service area of the terminal device, and the first service area is a service area of the terminal device when the main communication module is in the first state; and

the switching the main communication module from a first state to a second state based on the first information comprises:

when the quality of the first service area meets the first condition, switching the main communication module from the first state to the second state.

3. The method according to claim 2, wherein the first condition comprises at least one of the following:

a variation of the quality of the first service area within a first time threshold is less than a first variation threshold, wherein the first time threshold is greater than a time threshold in a low mobility criterion, or the first variation threshold is less than a variation threshold in a low mobility criterion;

the quality of the first service area is greater than a first quality threshold, wherein the first quality threshold is greater than a threshold in a cell center criterion; and

the quality of the first service area is greater than a second quality threshold, wherein the second quality threshold is greater than a threshold in an S criterion.

4. The method according to claim 2 or 3, wherein when the quality of the first service area meets the first condition, the terminal device stops performing measurement on a high-priority frequency.

5. The method according to any one of claims 2 to 4, wherein the method further comprises: sending second information to a network device, wherein the second information is used to request to change the state of the main communication module or indicates that the state of the

main communication module changes.

6. The method according to any one of claims 2 to 5, wherein the method further comprises:
receiving third information from the network device, wherein the third information indicates
that the network device allows the terminal device to switch the main communication module from
the first state to the second state.

7. The method according to claim 1, wherein the first information indicates to switch the main
communication module from the first state to the second state.

8. The method according to claim 7, wherein the method further comprises:
sending a measurement result of a first service area to a network device, wherein the first
service area is a service area of the terminal device when the main communication module is in
the first state.

9. The method according to any one of claims 1 to 8, wherein the method further comprises:
sending fourth information to the network device, wherein the fourth information indicates
that the terminal device tends to enter the idle state when exiting the connected state, or tends to
enter the inactive state when exiting the connected state, or tends to enter the second state when
exiting the connected state.

10. The method according to any one of claims 1 to 9, wherein the method further comprises:
receiving first wake-up radio WUR by using the secondary communication module, wherein
the first WUR is used to determine quality of a second service area of the terminal device, and the
second service area is a service area of the terminal device when the main communication module
is in the second state; and

when the quality of the second service area does not meet a second condition, switching the
main communication module from the second state to the first state.

11. The method according to claim 10, wherein the second condition comprises at least one
of the following:

a variation of the quality of the second service area within a second time threshold is less than
a second variation threshold, wherein the second time threshold is greater than a time threshold in
a low mobility criterion, or the second variation threshold is less than a variation threshold in a
low mobility criterion;

the quality of the second service area is greater than a third quality threshold, wherein the
third quality threshold is greater than a threshold in a cell center criterion; and

the quality of the second service area is greater than a fourth quality threshold, wherein the
fourth quality threshold is greater than a threshold in an S criterion.

12. The method according to claim 10 or 11, wherein the method further comprises:

receiving the second condition from the network device.

13. The method according to any one of claims 10 to 12, wherein the method further comprises:

5 sending sixth information to the network device, wherein the sixth information indicates that the state of the main communication module changes.

14. The method according to claim 13, wherein the sixth information is an identifier of the terminal device when the main communication module is in the second state or an identifier of the terminal device corresponding to the secondary communication module when the main communication module is in the second state.

10 15. The method according to any one of claims 1 to 9, wherein the method further comprises:

listening to second WUR by using the secondary communication module, wherein the second WUR indicates the terminal device to receive a paging message by using the main communication module; and

15 switching the main communication module from the second state to the first state when the second WUR is detected through listening.

16. A communication method, wherein the method comprises:

determining first information, wherein the first information is used by a terminal device to switch a main communication module from a first state to a second state, the first state comprises: the main communication module is in an idle state, an inactive state, and a connected state, and
20 the terminal device comprises the main communication module and a secondary communication module; and

sending the first information to the terminal device.

17. A communication apparatus configured to perform the method according to any one of claims 1 to 15, or the method according to claim 16.

25 18. A computer-readable storage medium, wherein the computer-readable storage medium comprises instructions, and when the instructions are run by a processor, the method according to any one of claims 1 to 15, or the method according to claim 16 is implemented.

19. A communication apparatus, wherein the communication apparatus comprises a processor and a storage medium, the storage medium stores instructions, and when the instructions are run
30 by the processor, the method according to any one of claims 1 to 15, or the method according to claim 16 is implemented.

20. A computer program product, wherein the computer program product comprises instructions, and when the instructions are run by a processor, the method according to any one of claims 1 to 15, or the method according to claim 16 is implemented.