

a downlink DAPS capability at a PerCC granularity. In a structure of the FeatureSetUpLink-v16xy, a new capability item dapsUpLinkParam is extended to report an uplink DAPS capability at the PerBand granularity; and a new capability item featureSetListPerUplinkCCDAPS is extended to report an uplink DAPS capability at the PerCC granularity.

5 **[00249]** Correspondingly, in the capability information sent by the terminal to the network device, the DAPS capability information supported by the terminal and corresponding to the first capability item includes: an uplink DAPS capability and a downlink DAPS capability at a per band granularity, and an uplink DAPS capability and a downlink DAPS capability at a per carrier granularity.

10 **[00250]** "An uplink DAPS capability at a per band granularity" may also be referred to as "an uplink DAPS capability of per band", and specifically refers to an uplink DAPS capability based on the PerBand granularity, or an uplink DAPS capability based on PerBand.

15 **[00251]** "A downlink DAPS capability at a per band granularity" may also be referred to as "a downlink DAPS capability of per band", and specifically refers to a downlink DAPS capability based on the PerBand granularity, or a downlink DAPS capability based on PerBand.

20 **[00252]** "An uplink DAPS capability at a per carrier granularity" may also be referred to as "an uplink DAPS capability of per carrier", and specifically refers to an uplink DAPS capability based on the per carrier granularity, an uplink DAPS capability based on per carrier, or an uplink DAPS capability based on per CC.

25 **[00253]** "A downlink DAPS capability at a per carrier granularity" may also be referred to as "a downlink DAPS capability of per carrier, and specifically refers to a downlink DAPS capability based on the per carrier granularity, a downlink DAPS capability based on perthe carrier, or a downlink DAPS capability based on per CC.

30 **[00254]** As described above, after obtaining the DAPS capability information of the terminal, the network device may initiate a DAPS handover of the terminal.

35 **[00255]** The following briefly describes a procedure in which a terminal performs a DAPS handover in the current technology with reference to FIG. 6. FIG. 6 is a schematic flowchart of an existing DAPS handover.

40 **[00256]** As shown in FIG. 6, a procedure of the existing DAPS handover may include S601 to S614.

45 **[00257]** S601: A terminal measures a target cell, and sends a report to a source base station.

[00258] The report sent by the terminal to the source base station includes an event that a signal strength of a current serving source cell is lower than a threshold and a signal strength of the target cell is higher than the threshold, and other events.

[00259] Correspondingly, the source base station receives the report from the terminal.

5 **[00260]** S602: The source base station determines to perform a terminal handover based on the report.

[00261] S603: The source base station sends a handover request (handover request) message to a target base station.

[00262] The target base station is a base station corresponding to the foregoing target cell.

10 **[00263]** S604: The target base station determines to allow the terminal to access.

[00264] For example, the target base station may determine, according to a situation such as a number of connections of the target base station, whether to allow the terminal to access, and send, if the terminal is allowed to access, a handover acknowledgment message to the source base station.

[00265] S605: The target base station sends a handover request acknowledgment (handover request acknowledge) message to the source base station.

15 **[00266]** Correspondingly, the source base station receives the handover request acknowledgment message from the target base station.

[00267] S606: The source base station sends a handover command to the terminal.

[00268] Correspondingly, the ~~source base station~~terminal device receives the handover command. The handover command may include related information of the target cell and a related configuration parameter required for the terminal to access the target cell.

20 **[00269]** S607: The terminal maintains a link communication with the source cell based on the handover command, and synchronizes with the target cell.

[00270] For example, the terminal may initiate random access to the target base station, to

25 complete a configuration in the target cell.

[00271] S608: The terminal sends an RRC reconfiguration complete message to the target base station.

[00272] Correspondingly, the target base station receives the RRC reconfiguration complete message from the terminal.

30 **[00273]** S609: The target base station sends a handover success (handover success) indication to the source base station.

CLAIMS

What is claimed is:

1. An information transmission method, wherein the method is applied to a terminal and the method comprises, comprising:

receiving, ~~by a terminal,~~ capability enquiry signaling from a network device; and

sending, ~~by the terminal,~~ capability information of the terminal to the network device,

wherein the capability information comprises: a first capability item and dual active protocol stack DAPS capability information supported by the terminal and corresponding to the first capability item, ~~and/or a second capability item and carrier aggregation CA capability information supported by the terminal and corresponding to the second capability item; or~~

wherein the capability information comprises: a first capability item and DAPS capability information supported by the terminal and corresponding to the first capability item, and a second capability item and carrier aggregation CA capability information supported by the terminal and corresponding to the second capability item.

2. The method according to claim 1, wherein the capability information comprises a specific parameter of each band in multiple band combinations;

the DAPS capability information supported by the terminal and corresponding to the first capability item is a specific parameter of each band in one band combination of the multiple band combinations; and/or

the CA capability information supported by the terminal and corresponding to the second capability item is a specific parameter of each band in one band combination of the multiple band combinations.

3. The method according to claim 2, wherein when the DAPS capability information supported by the terminal is different from the CA capability information supported by the terminal, the first capability item and the second capability item correspond to a specific parameter of each band in different band combinations.

4. The method according to claim 2 or 3, wherein when the DAPS capability information supported by the terminal is same as the CA capability information supported by the terminal, the first capability item and the second capability item correspond to a specific parameter of each band in a same band combination.

5 5. The method according to any one of claims 2 to 4, wherein the DAPS capability information supported by the terminal and corresponding to the first capability item comprises at least one of the following: an uplink DAPS capability and a downlink DAPS capability at a per band granularity, or an uplink DAPS capability and a downlink DAPS capability at a per carrier granularity.

6. An information transmission method, wherein the method is applied to a network device and the method comprises, comprising:

 sending, ~~by a network device,~~ capability enquiry signaling to a terminal; and

 receiving, ~~by the network device,~~ capability information from the terminal, wherein the capability information comprises a first capability item and dual active protocol stack DAPS capability information supported by the terminal and corresponding to the first capability item; ~~and/or a second capability item and CA capability information supported by the terminal and corresponding to the second capability item; or~~

wherein the capability information comprises a first capability item and DAPS capability information supported by the terminal and corresponding to the first capability item, and a second capability item and carrier aggregation CA capability information supported by the terminal and corresponding to the second capability item.

7. The method according to claim 6, wherein the capability information comprises a specific parameter of each band in multiple band combinations;

 the DAPS capability information supported by the terminal and corresponding to the first capability item is a specific parameter of each band in one band combination of the multiple band combinations; and/or

 the CA capability information supported by the terminal and corresponding to the second capability item is a specific parameter of each band in one band combination of the multiple band combinations.

8. The method according to claim 7, wherein when the DAPS capability information supported by the terminal is different from the CA capability information supported by the terminal, the first capability item and the second capability item correspond to a specific parameter of each band in different band combinations.

9. The method according to claim 7 or 8, wherein when the DAPS capability information supported by the terminal is same as the CA capability information supported by the terminal, the

first capability item and the second capability item correspond to a specific parameter of each band in a same band combination.

10. The method according to any one of claims 7 to 9, wherein the DAPS capability information supported by the terminal and corresponding to the first capability item comprises at least one of the following: an uplink DAPS capability and a downlink DAPS capability at a per band granularity, or an uplink DAPS capability and a downlink DAPS capability at a per carrier granularity.

~~11. An information transmission method, comprising:
maintaining, by a terminal, a link communication with a first cell, and successfully accessing
a second cell;
receiving, by the terminal, a first reconfiguration message from a network device of the
second cell; and
releasing, by the terminal, a configuration of the terminal in the first cell based on the first
reconfiguration message.~~

~~12. The method according to claim 11, wherein the first reconfiguration message is the first
reconfiguration message received by the terminal from the network device of the second cell after
the terminal successfully accesses the second cell.~~

~~13. The method according to claim 11 or 12, wherein the first reconfiguration message
comprises a source cell configuration release indication, or does not comprise the source cell
configuration release indication.~~

~~14. The method according to claim 11 or 12, wherein the first reconfiguration message does
not comprise a source cell configuration release indication; and the method further comprises:
keeping, by the terminal, an existing configuration in the second cell unchanged, and/or
sending a reconfiguration error message to the network device of the second cell.~~

~~15. The method according to any one of claims 11 to 14, wherein the maintaining, by a
terminal, a link communication with a first cell, and successfully accessing a second cell comprises:
receiving, by the terminal in a DAPS handover process, a handover command from a network
device of the first cell; and
maintaining, by the terminal, the link communication with the first cell based on the handover
command, and successfully accessing the second cell.~~

~~16. The method according to any one of claims 11 to 15, wherein the successfully accessing,~~

by a terminal, a second cell comprises:

synchronizing, by the terminal, with the second cell, and sending a reconfiguration complete message to the network device of the second cell.

~~17. An information transmission method, comprising:~~

~~5 sending, by a network device of a second cell after a terminal successfully accesses the second cell, a first reconfiguration message to the terminal, wherein the first reconfiguration message comprises a source cell configuration release indication, the source cell configuration release indication is used for instructing the terminal to release a configuration in a first cell, and the first cell is a cell with which the terminal maintains a link communication.~~

~~10 18. The method according to claim 17, wherein the first reconfiguration message is the first reconfiguration message sent by the network device of the second cell to the terminal after the terminal successfully accesses the second cell.~~

~~19. The method according to claim 17 or 18, wherein before the sending, by a network device of a second cell, a first reconfiguration message to the terminal, the method further comprises:~~

~~15 receiving, by the network device of the second cell, a reconfiguration complete message from the terminal.~~

~~20. The method according to any one of claims 17 to 19, wherein the sending, by a network device of a second cell, a first reconfiguration message to the terminal comprises:~~

~~20 sending, by the network device of the second cell, the first reconfiguration message to the terminal when sending a handover success indication to a network device of the first cell; or~~

~~terminal after sending the handover success indication to the network device of the first cell; or~~

~~terminal after receiving an SN status transfer indication from the network device of the first cell;~~

~~25 or~~

~~terminal after completing data forwarding; or~~

~~terminal before sending a path switch request message; or~~

~~30 sending, by the network device of the second cell, the first reconfiguration message to the terminal when sending the path switch request message; or~~

~~sending, by the network device of the second cell, the first reconfiguration message to the terminal after sending the path switch request message; or~~

~~sending, by the network device of the second cell, the first reconfiguration message to the terminal after receiving an end marker; or~~

5 ~~sending, by the network device of the second cell, the first reconfiguration message to the terminal after receiving a path switch request acknowledgment message; or~~

~~sending, by the network device of the second cell, the first reconfiguration message to the terminal before sending a terminal context release message to the network device of the first cell.~~

~~21. An information transmission method, comprising:~~

10 ~~maintaining, by a terminal, a link communication with a first cell, and successfully accessing a second cell;~~

~~receiving, by the terminal, a reconfiguration message from a network device of the first cell; and~~

15 ~~keeping, by the terminal, a configuration in the first cell unchanged, or determining not to perform a reconfiguration based on the reconfiguration message.~~

~~22. The method according to claim 21, further comprising:~~

~~sending, by the terminal, a reconfiguration error message to the network device of the first cell.~~

20 ~~23. The method according to claim 21 or 22, wherein the maintaining, by a terminal, a link communication with a first cell, and successfully accessing a second cell comprises:~~

~~receiving, by the terminal in a DAPS handover process, a handover command from the network device of the first cell; and~~

~~maintaining, by the terminal, the link communication with the first cell based on the handover command, and successfully accessing the second cell.~~

25 ~~24. The method according to any one of claims 21 to 23, wherein the successfully accessing, by a terminal, a second cell comprises:~~

~~synchronizing, by the terminal, with the second cell, and sending a reconfiguration complete message to a network device of the second cell.~~

~~2511. An information transmission apparatus, applied to a terminal, the apparatus comprising:~~

30 ~~a receiving module, configured to receive capability enquiry signaling from a network device; and~~

a sending module, configured to send capability information of the terminal to the network device, wherein the capability information comprises: a first capability item and dual active protocol stack DAPS capability information supported by the terminal and corresponding to the first capability item, ~~and/or a second capability item and carrier aggregation CA capability information supported by the terminal and corresponding to the second capability item; or~~

wherein the capability information comprises: a first capability item and DAPS capability information supported by the terminal and corresponding to the first capability item, and a second capability item and carrier aggregation CA capability information supported by the terminal and corresponding to the second capability item.

1226. The apparatus according to claim 1125, wherein the capability information comprises a specific parameter of each band in multiple band combinations;

the DAPS capability information supported by the terminal and corresponding to the first capability item is a specific parameter of each band in one band combination of the multiple band combinations; and/or

the CA capability information supported by the terminal and corresponding to the second capability item is a specific parameter of each band in one band combination of the multiple band combinations.

1327. The apparatus according to claim 1226, wherein when the DAPS capability information supported by the terminal is different from the CA capability information supported by the terminal, the first capability item and the second capability item correspond to a specific parameter of each band in different band combinations.

1428. The apparatus according to claim 1226 or 1327, wherein when the DAPS capability information supported by the terminal is same as the CA capability information supported by the terminal, the first capability item and the second capability item correspond to a specific parameter of each band in a same band combination.

1529. The apparatus according to any one of claims 1126 to 1428, wherein the DAPS capability information supported by the terminal and corresponding to the first capability item comprises at least one of the following: an uplink DAPS capability and a downlink DAPS capability at a per band granularity, or an uplink DAPS capability and a downlink DAPS capability at a per carrier granularity.

1630. An information transmission apparatus, applied to a network device, the apparatus

comprising:

a sending module, configured to send capability enquiry signaling to a terminal; and

a receiving module, configured to receive capability information from the terminal, wherein the capability information comprises a first capability item and dual active protocol stack DAPS capability information supported by the terminal and corresponding to the first capability item, ~~and/or a second capability item and CA capability information supported by the terminal and corresponding to the second capability item; or~~

wherein the capability information comprises a first capability item and DAPS capability information supported by the terminal and corresponding to the first capability item, and a second capability item and carrier aggregation CA capability information supported by the terminal and corresponding to the second capability item.

~~1731.~~ The apparatus according to claim ~~1630~~, wherein the capability information comprises a specific parameter of each band in multiple band combinations;

the DAPS capability information supported by the terminal and corresponding to the first capability item is a specific parameter of each band in one band combination of the multiple band combinations; and/or

the CA capability information supported by the terminal and corresponding to the second capability item is a specific parameter of each band in one band combination of the multiple band combinations.

~~1832.~~ The apparatus according to claim ~~1731~~, wherein when the DAPS capability information supported by the terminal is different from the CA capability information supported by the terminal, the first capability item and the second capability item correspond to a specific parameter of each band in different band combinations.

~~1933.~~ The apparatus according to claim ~~1731~~ or ~~1832~~, wherein when the DAPS capability information supported by the terminal is same as the CA capability information supported by the terminal, the first capability item and the second capability item correspond to a specific parameter of each band in a same band combination.

~~2034.~~ The apparatus according to any one of claims ~~1631~~ to ~~1933~~, wherein the DAPS capability information supported by the terminal and corresponding to the first capability item comprises at least one of the following: an uplink DAPS capability and a downlink DAPS capability at a per band granularity, or an uplink DAPS capability and a downlink DAPS capability

at a per carrier granularity.

~~35. An information transmission apparatus, applied to a terminal, the apparatus comprising:
an access module, configured to maintain a link communication between the terminal and a
first cell, and successfully access a second cell;~~

~~5 a receiving module, configured to receive a first reconfiguration message from a network
device of the second cell; and~~

~~a release module, configured to release a configuration of the terminal in the first cell based
on the first reconfiguration message.~~

~~36. The apparatus according to claim 35, wherein the first reconfiguration message is the first
10 reconfiguration message received by the receiving module from the network device of the second
cell after the terminal successfully accesses the second cell.~~

~~37. The apparatus according to claim 35 or 36, wherein the first reconfiguration message
comprises a source cell configuration release indication, or does not comprise the source cell
configuration release indication.~~

~~15 38. The apparatus according to claim 35 or 36, wherein the first reconfiguration message does
not comprise a source cell configuration release indication; and~~

~~the access module is further configured to keep an existing configuration in the second cell
unchanged, and/or send a reconfiguration error message to the network device of the second cell.~~

~~39. The apparatus according to any one of claims 35 to 38, wherein in a DAPS handover
20 process, the receiving module is further configured to receive a handover command from a network
device of the first cell; and~~

~~the access module is specifically configured to maintain the link communication between the
terminal and the first cell based on the handover command, and successfully access the second
cell.~~

~~25 40. The apparatus according to any one of claims 35 to 39, wherein the access module is
specifically configured to control the terminal to synchronize with the second cell, and send a
reconfiguration complete message to the network device of the second cell.~~

~~41. An information transmission apparatus, comprising:~~

~~a sending module, configured to send, after a terminal successfully accesses the second cell,
30 a first reconfiguration message to the terminal, wherein the first reconfiguration message
comprises a source cell configuration release indication, the source cell configuration release~~

indication is used for instructing the terminal to release a configuration in a first cell, and the first cell is a cell with which the terminal maintains a link communication.

42. The apparatus according to claim 41, wherein the first reconfiguration message is the first reconfiguration message sent by the sending module to the terminal after the terminal successfully accesses the second cell.

43. The apparatus according to claim 41 or 42, further comprising:
a receiving module, configured to receive a reconfiguration complete message from the terminal.

44. The apparatus according to any one of claims 41 to 43, wherein the sending module is specifically configured to send the first reconfiguration message to the terminal when sending a handover success indication to a network device of the first cell; or

send the first reconfiguration message to the terminal after sending the handover success indication to the network device of the first cell; or

send the first reconfiguration message to the terminal after receiving an SN status transfer indication from the network device of the first cell; or

send the first reconfiguration message to the terminal after completing data forwarding; or

send the first reconfiguration message to the terminal before sending a path switch request message; or

send the first reconfiguration message to the terminal when sending the path switch request message; or

send the first reconfiguration message to the terminal after sending the path switch request message; or

send the first reconfiguration message to the terminal after receiving an end marker; or

send the first reconfiguration message to the terminal after receiving a path switch request acknowledgment message; or

send the first reconfiguration message to the terminal before sending a terminal context release message to the network device of the first cell.

45. An information transmission apparatus, applied to a terminal, the apparatus comprising:
an access module, configured to maintain a link communication between the terminal and a first cell, and successfully access a second cell;

a receiving module, configured to receive a reconfiguration message from a network device

of the first cell; and

~~the access module, further configured to keep a configuration of the terminal in the first cell unchanged, or determine not to perform a reconfiguration based on the reconfiguration message.~~

~~46. The apparatus according to claim 45, further comprising:~~

~~a sending module, configured to send a reconfiguration error message to the network device of the first cell.~~

~~47. The apparatus according to claim 45 or 46, wherein in a DAPS handover process, the receiving module is further configured to receive a handover command from the network device of the first cell; and~~

~~the access module is specifically configured to maintain the link communication between the terminal and the first cell based on the handover command, and successfully access the second cell.~~

~~48. The apparatus according to any one of claims 45 to 47, wherein the access module is specifically configured to control the terminal to synchronize with the second cell, and send a reconfiguration complete message to a network device of the second cell.~~

2149. A communication apparatus, comprising: a processor, configured to execute computer instructions stored in a memory, the computer instructions, when being executed, enabling the apparatus to perform the method according to any one of claims 1 to 5.

2250. A communication apparatus, comprising: a processor, configured to execute computer instructions stored in a memory, the computer instructions, when being executed, enabling the apparatus to perform the method according to any one of claims 6 to 10.

~~51. A communication apparatus, comprising: a processor, configured to execute computer instructions stored in a memory, the computer instructions, when being executed, enabling the apparatus to perform the method according to any one of claims 11 to 16 or the method according to any one of claims 21 to 24.~~

~~52. A communication apparatus, comprising: a processor, configured to execute computer instructions stored in a memory, the computer instructions, when being executed, enabling the apparatus to perform the method according to any one of claims 17 to 20.~~

2353. A communication apparatus, comprising: a processor and an interface circuit, wherein the processor is configured to communicate with another apparatus through the interface circuit, and perform the method according to any one of claims 1 to 5.

5424. A communication apparatus, comprising: a processor and an interface circuit, wherein the processor is configured to communicate with another apparatus through the interface circuit, and perform the method according to any one of claims 6 to 10.

~~55. A communication apparatus, comprising: a processor and an interface circuit, wherein the processor is configured to communicate with another apparatus through the interface circuit, and perform the method according to any one of claims 11 to 16 or the method according to any one of claims 21 to 24.~~

~~56. A communication apparatus, comprising: a processor and an interface circuit, wherein the processor is configured to communicate with another apparatus through the interface circuit, and perform the method according to any one of claims 17 to 20.~~

2557. A computer-readable storage medium, comprising computer software instructions, wherein

when the computer software instructions run in a terminal or a chip built in a terminal, the terminal is enabled to perform the method according to any one of claims 1 to 5.

2658. A computer-readable storage medium, comprising computer software instructions, wherein

when the computer software instructions run in a network device or a chip built in a network device, the network device is enabled to perform the method according to any one of claims 6 to 10.

~~59. A computer-readable storage medium, comprising computer software instructions, wherein~~

~~when the computer software instructions run in a terminal or a chip built in a terminal, the terminal is enabled to perform the method according to any one of claims 11 to 16 or the method according to any one of claims 21 to 24.~~

~~60. A computer-readable storage medium, comprising computer software instructions, wherein~~

~~when the computer software instructions run in a network device or a chip built in a network device, the network device is enabled to perform the method according to any one of claims 17 to 20.~~

2764. A communication system, comprising: a network device and a terminal, wherein the terminal performs the method according to any one of claims 1 to 5; and

the network device performs the method according to any one of claims 6 to 10.

~~62. A communication system, comprising: a network device and a terminal, wherein
the terminal performs the method according to any one of claims 11 to 16, and the network
device performs the method according to any one of claims 17 to 20; or~~

5 ~~the terminal performs the method according to any one of claims 21 to 24.~~