CLAIMS

What is claimed is:

1. A communication method based on integrated access and backhaul IAB, wherein the method comprises:

reporting, by an IAB node, first information to a donor node of the IAB node, wherein the first information indicates a first condition, and the first condition is a condition under which a mobile termination MT of the IAB node and a distributed unit DU of the IAB node work synchronously; and

under the first condition, communicating with, by the DU of the IAB node, a lower-level node of the IAB node or a terminal device, and synchronously, communicating with, by the MT of the IAB node, an upper-level node of the IAB node.

2. The method according to claim 1, wherein the method further comprises:

reporting, by the IAB node, first indication information to the donor node of the IAB node, wherein the first indication information indicates whether the first condition needs to be met when the MT of the IAB node and the DU of the IAB node work synchronously.

3. The method according to claim 1, wherein the first condition comprises an available frequency domain resource of the MT of the IAB node when the MT of the IAB node and the DU of the IAB node work synchronously.

4. The method according to claim 3, wherein the available frequency domain resource comprises any one or more of the following:

a start physical resource block PRB of the available frequency domain resource;

an end PRB of the available frequency domain resource;

an absolute radio frequency channel number ARFCN; and

a quantity of resource blocks RBs of the available frequency domain resource.

5. The method according to any one of claims 1 to 4, wherein the first condition comprises: an expected transmit power of a DU of an upper-level node when the MT of the IAB node and the DU of the IAB node work synchronously, and/or an expected transmit power of the MT of the IAB node when the MT of the IAB node and the DU of the IAB node work synchronously.

6. A communication method based on integrated access and backhaul IAB, wherein the method comprises:

reporting, by an IAB node, multiplexing capability information to a donor node of the IAB node, wherein the multiplexing capability information comprises supported, not supported and limited;

the supported indicates a mobile termination (MT) and a distributed unit (DU) of the IAB node unconditionally support synchronous receiving or synchronous sending;

the not supported indicates that the MT and the DU of the IAB node do not support synchronous receiving or synchronous sending; and

the limited indicates that the MT and the DU of the IAB node support synchronous receiving or synchronous sending under a first condition.

7. The method according to claim 6, wherein the first condition is the MT and the DU of the IAB node are in a frequency division multiplexing mode.

8. A communication apparatus, wherein the communication apparatus comprises:

a transceiver unit, configured to report first information to a donor node of the communication apparatus, wherein the first information indicates a first condition, and the first condition is a condition under which a mobile termination MT of the communication apparatus and a distributed unit DU of the communication apparatus work synchronously; and

a processing unit, configured to: under the first condition, communicate with a lower-level node of the communication apparatus or a terminal device, and synchronously, communicate with an upper-level node of the communication apparatus.

9. The communication apparatus according to claim 8, wherein

the transceiver unit is further configured to report first indication information to the donor node of the communication apparatus, wherein the first indication information indicates whether the first condition needs to be met when the MT of the communication apparatus and the DU of the communication apparatus work synchronously.

10. The communication apparatus according to claim 8, wherein the first condition comprises an available frequency domain resource of the MT of the communication apparatus when the MT of the communication apparatus and the DU of the communication apparatus work synchronously.

11. The communication apparatus according to claim 10, wherein the available frequency domain resource comprises any one or more of the following:

a start physical resource block PRB of the available frequency domain resource;

an end PRB of the available frequency domain resource;

an absolute radio frequency channel number ARFCN; and

a quantity of resource blocks RBs of the available frequency domain resource.

12. The communication apparatus according to any one of claims 8 to 11, wherein the first condition comprises: an expected transmit power of a DU of an upper-level node when the MT of the communication apparatus and the DU of the communication apparatus work synchronously, and/or an expected transmit power of the MT of the communication apparatus when the MT of the communication apparatus and the DU of the communication apparatus work synchronously.

13. A communication apparatus, wherein the communication apparatus comprises:

a transceiver unit, configured to report multiplexing capability information to a donor node of the IAB node, wherein the multiplexing capability information comprises supported, not supported and limited;

the supported indicates a mobile termination (MT) and a distributed unit (DU) of the IAB node unconditionally support synchronous receiving or synchronous sending;

the not supported indicates that the MT and the DU of the IAB node do not support synchronous receiving or synchronous sending; and

the limited indicates that the MT and the DU of the IAB node support synchronous receiving or synchronous sending under a first condition.

14. The communication apparatus according to claim 13, wherein

wherein the first condition is the MT and the DU of the IAB node are in a frequency division multiplexing mode.

15. A communication apparatus, comprising a processor, wherein

the processor is configured to execute computer-executable instructions in a memory, so that the method according to any one of claims 1 to 7 is performed.

16. A communication apparatus, comprising a processor and a memory, wherein

the memory is configured to store computer-executable instructions; and

the processor is configured to execute the computer-executable instructions stored in the memory, so that the method according to any one of claims 1 to 7 is performed.

17. A communication apparatus, wherein the communication apparatus is configured to perform the method according to any one of claims 1 to 7.

18. A computer-readable storage medium, wherein the computer-readable storage medium is configured to store a computer program, and when the computer program is executed, the method

according to any one of claims 1 to 7 is performed.

19. A computer program product, wherein the computer program product comprises a computer program, and when the computer program is executed, the method according to any one of claims 1 to 7 is performed.