

CLAIMS

What is claimed is:

1. A channel quality indicator reporting method, performed by an integrated access backhaul IAB node, wherein the IAB node is a child IAB node comprising an IAB node distributed unit IAB-DU and an IAB node mobile terminal IAB-MT, and the method comprises:

obtaining a target channel quality indicator CQI type that needs to be reported, wherein different interference information is used for calculating CQIs of different target CQI types, and interference of the IAB-DU to reception of the IAB-MT is comprised in interference information used for calculating a CQI of the target CQI type; and

calculating the CQI of the target CQI type, and reporting the CQI of the target CQI type to a parent IAB node for the child IAB node.

2. The method according to claim 1, wherein the target CQI type comprises at least one of the following:

a first CQI type, wherein interference corresponding to the interference information used for calculation of a CQI of the first CQI type comprises interference of transmission of the IAB-DU to reception of the IAB-MT;

a second CQI type, wherein interference corresponding to the interference information used for calculation of a CQI of the second CQI type comprises interference of reception of the IAB-DU to reception of the IAB-MT;

a third CQI type, wherein interference corresponding to the interference information used for calculation of a CQI of the third CQI type comprises interference of another interference source to reception of the IAB-MT;

a fourth CQI type, wherein interference corresponding to the interference information used for calculation of a CQI of the fourth CQI type comprises a sum of interference of transmission of the IAB-DU to reception of the IAB-MT and interference of another interference source to reception of the IAB-MT; and

a fifth CQI type, wherein interference corresponding to the interference information used for calculation of a CQI of the fifth CQI type comprises a sum of interference of reception of the IAB-DU to reception of the IAB-MT and interference of another interference source to reception of the IAB-MT; wherein

5 the another interference source is interference other than the interference of transmission and/or reception of the IAB-DU to reception of the IAB-MT.

3. The method according to claim 1, wherein the target CQI type is obtained in at least one of the following manners:

being specified by a protocol;

10 being configured by the parent IAB node or a centralized unit CU;

being dynamically indicated by the parent IAB node or the CU; and

being determined by the IAB node.

4. The method according to claim 3, wherein if the target CQI type is configured by the parent IAB node or the CU, the obtaining a target CQI type that
15 needs to be reported comprises:

receiving channel state information CSI report configuration information, wherein the CSI report configuration information carries the target CQI type;

or

wherein if the target CQI type is dynamically indicated by the parent IAB node
20 or the CU, the obtaining a target CQI type that needs to be reported comprises:

receiving downlink control information, wherein the downlink control information is used to indicate at least one target CQI type that needs to be reported.

5. The method according to claim 4, wherein

the CSI report configuration information comprises a CSI report quantity field,
25 the CSI report quantity field comprises at least one report CQI item, and the report CQI item indicates at least one target CQI type that needs to be reported; or

the CSI report configuration information comprises a CSI report quantity field and an indicator field, the CSI report quantity field comprises at least one report CQI item, and the indicator field is used to indicate at least one target CQI type
30 corresponding to the report CQI item; or

wherein the downlink control information is downlink control information that triggers aperiodic or semi-static CSI reporting.

6. The method according to claim 3, wherein the calculating and reporting the CQI of the target CQI type comprises:

5 having the target CQI type carried in the CQI for reporting.

7. The method according to claim 6, before the calculating and reporting the CQI of the target CQI type, further comprising:

10 obtaining CSI report configuration information, wherein the CSI report configuration information carries an indicator indicating whether the target CQI type is carried in the CQI for reporting.

8. The method according to claim 2, wherein the obtaining a target CQI type that needs to be reported comprises:

15 obtaining, based on configuration of a measurement resource, the target CQI type that needs to be reported, wherein the measurement resource comprises at least one of the following: a channel measurement resource, an interference measurement resource, and a cross-link interference measurement resource.

9. The method according to claim 8, wherein the obtaining, based on configuration of a measurement resource, the target CQI type that needs to be reported comprises at least one of the following:

20 if the channel measurement resource and/or the interference measurement resource is configured with a first time occasion, reception of the IAB-MT and transmission of the IAB-DU being at the first time occasion, determining that the target CQI type comprises at least one of the following: the first CQI type and the fourth CQI type;

25 if the channel measurement resource and/or the interference measurement resource is configured with a second time occasion, reception of the IAB-MT and reception of the IAB-DU being at a second time occasion, determining that the target CQI type comprises at least one of the following: the second CQI type and the fifth CQI type; and

if the interference measurement resource configuration overlaps the cross-link interference measurement resource configuration, determining that the target CQI type comprises at least one of the following: the second CQI type and the fifth CQI type.

- 5 10. A channel quality indicator reporting method, performed by an integrated access backhaul IAB node, wherein the IAB node is a parent IAB node for a child IAB node, and the method comprises:

receiving a channel quality indicator CQI of a target CQI type reported by the child IAB node, wherein the child IAB node comprises an IAB node distributed unit
10 IAB-DU and an IAB node mobile terminal IAB-MT; and

determining the target CQI type of the reported CQI, wherein different interference information is used for calculating CQIs of different target CQI types, and interference of the IAB-DU to reception of the IAB-MT is comprised in interference information used for calculating the CQI of the target CQI type.

- 15 11. The method according to claim 10, wherein the target CQI type comprises at least one of the following:

a first CQI type, wherein interference corresponding to the interference information used for calculation of a CQI of the first CQI type comprises interference of transmission of the IAB-DU to reception of the IAB-MT;

- 20 a second CQI type, wherein interference corresponding to the interference information used for calculation of a CQI of the second CQI type comprises interference of reception of the IAB-DU to reception of the IAB-MT;

- a third CQI type, wherein interference corresponding to the interference information used for calculation of a CQI of the third CQI type comprises
25 interference of another interference source to reception of the IAB-MT;

a fourth CQI type, wherein interference corresponding to the interference information used for calculation of a CQI of the fourth CQI type comprises a sum of interference of transmission of the IAB-DU to reception of the IAB-MT and interference of another interference source to reception of the IAB-MT; and

a fifth CQI type, wherein interference corresponding to the interference information used for calculation of a CQI of the fifth CQI type comprises a sum of interference of reception of the IAB-DU to reception of the IAB-MT and interference of another interference source to reception of the IAB-MT; wherein

5 the another interference source is interference other than the interference of transmission and/or reception of the IAB-DU to reception of the IAB-MT.

12. The method according to claim 10, wherein the target CQI type is determined in at least one of the following manners:

being specified by a protocol;

10 being configured by the IAB node or a centralized unit CU;

being dynamically indicated by the IAB node or the CU; and

being determined by the child IAB node.

13. The method according to claim 12, wherein if the target CQI type is configured by the IAB node or the CU, before the receiving a CQI reported by the

15 child IAB node, the method further comprises:

sending channel state information CSI report configuration information to the child IAB node, wherein the CSI report configuration information carries the target CQI type;

or

20 wherein if the target CQI type is dynamically indicated by the IAB node or the CU, before the receiving a CQI reported by the child IAB node, the method further comprises:

sending downlink control information to the child IAB node, wherein the downlink control information is used to indicate at least one target CQI type that
25 needs to be reported.

14. The method according to claim 13, wherein

the CSI report configuration information comprises a CSI report quantity field, the CSI report quantity field comprises at least one report CQI item, and the report CQI item indicates at least one target CQI type that needs to be reported; or

the CSI report configuration information comprises a CSI report quantity field and an indicator field, the CSI report quantity field comprises at least one report CQI item, and the indicator field is used to indicate at least one target CQI type corresponding to the report CQI item; or

- 5 wherein the downlink control information is downlink control information that triggers aperiodic or semi-static CSI reporting.

15. The method according to claim 12, wherein the determining a target CQI type of the reported CQI comprises:

obtaining the target CQI type carried in the reported CQI.

- 10 16. The method according to claim 15, before the determining a target CQI type of the reported CQI, further comprising:

sending CSI report configuration information to the child IAB node, wherein the CSI report configuration information carries an indicator indicating whether the target CQI type is carried in the CQI for reporting.

- 15 17. The method according to claim 11, wherein the determining a target CQI type of the reported CQI comprises:

determining, based on configuration of a measurement resource, the target CQI type of the reported CQI, wherein the measurement resource comprises at least one of the following: a channel measurement resource, an interference measurement resource, and a cross-link interference measurement resource.

- 20 18. The method according to claim 17, wherein the determining, based on configuration of a measurement resource, the target CQI type of the reported CQI comprises at least one of the following:

if the channel measurement resource and/or the interference measurement resource is configured with a first time occasion, reception of the IAB-MT and transmission of the IAB-DU being at the first time occasion, determining that the target CQI type comprises at least one of the following: the first CQI type and the fourth CQI type;

if the channel measurement resource and/or the interference measurement resource is configured with a second time occasion, reception of the IAB-MT and

reception of the IAB-DU being at a second time occasion, determining that the target CQI type comprises at least one of the following: the second CQI type and the fifth CQI type; and

5 if the interference measurement resource configuration overlaps the cross-link interference measurement resource configuration, determining that the target CQI type comprises at least one of the following: the second CQI type and the fifth CQI type.

19. An integrated access backhaul node, comprising a processor, a memory, and a computer program stored in the memory and capable of running on the processor,
10 wherein when the computer program is executed by the processor comprised in a child integrated access backhaul IAB node, the steps of the channel quality indicator reporting method according to any one of claims 1 to 9 are implemented, or when the computer program is executed by the processor comprised in a parent IAB node, the steps of the channel quality indicator reporting method according to any one of
15 claims 10 to 18 are implemented.

20. A computer-readable storage medium, wherein the computer-readable storage medium stores a computer program, and when the computer program is executed by a processor comprised in a child integrated access backhaul IAB node, the steps of the channel quality indicator reporting method according to any one of
20 claims 1 to 9 are implemented, or when the computer program is executed by a processor comprised in a parent IAB node, the steps of the channel quality indicator reporting method according to any one of claims 10 to 18 are implemented.