

CLAIMS

1. A method for determining a downlink control information size alignment, performed by a terminal, comprising:

receiving first downlink control information for scheduling a plurality of cells;

determining a reference cell among at least one first cell corresponding to the first downlink control information; and

determining a size alignment on pieces of legacy downlink control information and the first downlink control information in the reference cell, and determining a size alignment on pieces of legacy downlink control information in a second cell among the at least one first cell, wherein the second cell is a cell other than the reference cell among the at least one first cell.

2. The method according to claim 1, wherein the at least one first cell comprises at least one of:

a cell comprised in a cell set corresponding to a first downlink control information for scheduling a downlink transmission;

a cell comprised in a cell set corresponding to a first downlink control information for scheduling an uplink transmission; or

a cell comprised in a cell set corresponding to a first downlink control information for scheduling a downlink transmission and in a cell set corresponding to a first downlink control information for scheduling an uplink transmission.

3. The method according to any one of claims 1 to 2, wherein the reference cell comprises at least one of:

a cell with a smallest cell index among the at least one first cell;

a cell with a largest cell index among the at least one first cell;

a cell with a smallest number of sizes of pieces of legacy downlink control information configured among the at least one first cell;

a cell for calculating a blind detection resource among the at least one first cell; or

a cell configured with a search space corresponding to the first downlink control information among the at least one first cell.

4. The method according to any one of claims 1 to 3, wherein the pieces of legacy downlink control information in each cell scheduled by the first downlink control information satisfy a preset condition, and the preset condition comprises:

the number of sizes of the pieces of legacy downlink control information scrambled by a cell radio network temporary identifier (C-RNTI) is less than or equal to a first number; and

the number of sizes of the pieces of legacy downlink control information scrambled by an RNTI other than the C-RNTI is less than or equal to a second number.

5. The method according to claim 4, wherein the first number is 3 or 4, and the second number is 1.

6. The method according to any one of claims 1 to 5, wherein in any cell of a plurality of cells scheduled by the first downlink control information, the number of the one or more sizes of the pieces of legacy downlink control information aligned is less than or equal to a third number, and the third number is 2 or 3.

7. A method for performing a downlink control information size alignment, performed by a network device, comprising:

determining a reference cell among at least one first cell corresponding to first downlink control information for scheduling a plurality of cells;

performing a size alignment on pieces of legacy downlink control information and the first downlink control information in the reference cell, and performing a size alignment on pieces of legacy downlink control information in a second cell among the at least one first cell, wherein the second cell is a cell other than the reference cell among the at least one first cell; and

transmitting the first downlink control information to a terminal.

8. The method according to claim 7, wherein the at least one first cell comprises at least one of:

a cell comprised in a cell set corresponding to a first downlink control information for scheduling a downlink transmission;

a cell comprised in a cell set corresponding to a first downlink control information for scheduling an uplink transmission; or

a cell comprised in a cell set corresponding to a first downlink control information for scheduling a downlink transmission and in a cell set corresponding to a first downlink control information for scheduling an uplink transmission.

9. The method according to any one of claims 7 to 8, wherein the reference cell comprises at least one of:

a cell with a smallest cell index among the at least one first cell;

a cell with a largest cell index among the at least one first cell;

a cell with a smallest number of sizes of the pieces of legacy downlink control information configured among the at least one first cell;

a cell for calculating a blind detection resource among the at least one first cell; or

a cell configured with a search space corresponding to the first downlink control information among the at least one first cell.

10. The method according to any one of claims 7 to 9, wherein the pieces of legacy downlink control information in each cell scheduled by the first downlink control information satisfy a preset condition, and the preset condition comprises:

the number of sizes of the pieces of legacy downlink control information scrambled by a cell radio network temporary identifier (C-RNTI) is less than or equal to a first number; and

the number of sizes of the pieces of legacy downlink control information scrambled by an RNTI other than the C-RNTI is less than or equal to a second number.

11. The method according to claim 10, wherein the first number is 3 or 4, and the second number is 1.

12. The method according to any one of claims 7 to 11, wherein in any cell of a plurality of cells scheduled by the first downlink control information, the number of the one or more sizes of the pieces of legacy downlink control information aligned is less than or equal to a third number, and the third number is 2 or 3.

13. An apparatus for determining downlink control information size alignment, comprising:

a receiving module configured to receive first downlink control information for scheduling a plurality of cells; and

a processing module configured to determine a reference cell among at least one first cell corresponding to the first downlink control information, determine a size alignment on pieces of legacy downlink control information and the first downlink control information in the reference cell, and determine a size alignment on pieces of legacy downlink control information in a second cell among the at least one first cell, wherein the second cell is a cell other than the reference cell among the at least one first cell.

14. An apparatus for performing a downlink control information size alignment, comprising:

a processing module configured to determine a reference cell among at least one first cell corresponding to first downlink control information for scheduling a plurality of cells, perform a size alignment on pieces of legacy downlink control information and the first downlink control information in the reference cell, and perform a size alignment on pieces of legacy downlink

control information in a second cell among the at least one first cell, wherein the second cell is a cell other than the reference cell among the at least one first cell; and

a transmitting module configured to transmit the first downlink control information to a terminal.

15. A system for a downlink control information size alignment, comprising: a terminal and a network device, wherein the terminal is configured to implement the method for determining the downlink control information size alignment according to any one of claims 1 to 6, and the network device is configured to implement the method for performing the downlink control information size alignment according to any one of claims 7 to 12.

16. A communication device, comprising:

a processor; and

a memory configured to store a computer program,

wherein the computer program, when executed by the processor, causes the method for determining the downlink control information size alignment according to any one of claims 1 to 6 to be implemented.

17. A communication device, comprising:

a processor; and

a memory configured to store a computer program,

wherein the computer program, when executed by the processor, causes the method for performing the downlink control information size alignment according to any one of claims 7 to 12 to be implemented.

18. A computer-readable storage medium, configured to store a computer program, wherein the computer program, when executed by a processor, causes the method for determining the downlink control information size alignment according to any one of claims 1 to 6 to be implemented.

19. A computer-readable storage medium, configured to store a computer program, wherein the computer program, when executed by the processor, causes the method for performing the downlink control information size alignment according to any one of claims 7 to 12 to be implemented.