

CLAIMS

1. A method for wireless communication, comprising:
 - receiving, by a terminal device, first downlink control information in a first time-domain scheduling unit; and
 - acquiring, by the terminal device, information about second downlink control information to be detected in the first time-domain scheduling unit according to the first downlink control information,
 - wherein the first downlink control information and the second downlink control information are used for scheduling different data of the terminal device, respectively.
2. The method of claim 1, wherein the first downlink control information contains the information about the second downlink control information, and the acquiring, by the terminal device, the information about the second downlink control information to be detected in the first time-domain scheduling unit according to the first downlink control information comprises:
 - acquiring, by the terminal device, the information about the second downlink control information from the first downlink control information.
3. The method of claim 2, further comprising:
 - detecting, by the terminal device, the second downlink control information in the first time-domain scheduling unit according to the information about the second downlink control information.
4. The method of any one of claims 1 to 3, wherein the information about the second downlink control information comprises at least one of a search space of the second downlink control information, an aggregation level of the second downlink control information, a resource position of the second downlink control information, a size of the second downlink control information, a format of the second downlink control information, beam information for receiving and/or sending the second downlink control information or quasi-co-location information of the second downlink control information.
5. The method of claim 1 or 2, further comprising:

determining, by the terminal device, a number N of pieces of the second downlink control information according to the information about the second downlink control information, with N being an integer, $N \leq (M-1)$, M being a number of pieces of downlink control information pre-configured by a network device for the terminal device and M being a positive integer;

if N is a positive integer, learning, by the terminal device, that N pieces of second downlink control information exist in the first time-domain scheduling unit; or

if N is equal to 0, learning, by the terminal device, that no second downlink control information exists in the first time-domain scheduling unit.

6. The method of claim 5, wherein the information about the second downlink control information is a number N of pieces of the second downlink control information, or a number (N+1) of pieces of downlink control information sent by a transmission and reception point, and the downlink control information sent by the transmission and reception point comprises the first downlink control information and the second downlink control information.

7. The method of any one of claims 1 to 6, further comprising:

receiving, by the terminal device, instruction information sent by a network device, wherein the instruction information is used to instruct the terminal device to receive a plurality of pieces of downlink control information in the first time-domain scheduling unit.

8. The method of any one of claims 1 to 7, wherein the first downlink control information and the second downlink control information are sent by different transmission and reception points.

9. A method for wireless communication, comprising:

sending, by a first transmission and reception point, first downlink control information to a terminal device in a first time-domain scheduling unit, wherein the first downlink control information contains information about second downlink control information to be detected by the terminal device in the first time-domain scheduling unit, and the second downlink control information is used to indicate a downlink resource allocated for second downlink data,

wherein the first downlink control information and the second downlink control information are used for scheduling different data of the terminal device, respectively.

10. The method of claim 9, wherein the information about the second downlink control information comprises at least one of a search space of the second downlink control information, an aggregation level of the second downlink control information, a resource position of the second downlink control information, a size of the second downlink control information, a format of the second downlink control information, beam information for receiving and/or sending the second downlink control information or quasi-co-location information of the second downlink control information.

11. The method of claim 9, wherein the information about the second downlink control information is a number N of pieces of the second downlink control information, or a number $(N+1)$ of pieces of downlink control information sent by at least one transmission and reception point, and at least one transmission and reception point comprises the first transmission and reception point, with N being an integer, $N \leq (M-1)$, M being a number of pieces of downlink control information pre-configured by a network device for the terminal device, and M being a positive integer.

12. The method of any one of claims 9 to 11, wherein the second downlink control information is sent by a second transmission and reception point.

13. A terminal device, the terminal device being configured to execute the method for wireless communication of any one of claims 1 to 8.

14. A transmission and reception point, the transmission and reception point being configured to execute the method for wireless communication of any one of claims 9 to 12.