

CLAIMS

1. A method for information transmission, comprising:

5 receiving, by a terminal, indication information, wherein the indication information is to indicate one of:

existence states of physical downlink control channels (PDCCHs) of one or more other terminals in a physical downlink shared channel (PDSCH) transmitted to the terminal; or

10 existence states of PDCCHs of one or more other terminals in a PDSCH transmitted to the terminal, and resource occupation states of the one or more other terminals in the PDSCH transmitted to the terminal; and

performing, by the terminal, rate matching on the PDSCH transmitted to the terminal based on the indication information,

15 wherein the existence states indicate whether the PDCCHs of the one or more other terminals exist in the PDSCH transmitted to the terminal, and the resource occupation states indicate whether resources in the PDSCH transmitted to the terminal are occupied by the one or more other terminals.

2. The method of claim 1, wherein the indication information comprises one bit in PDCCH signaling or radio resource control (RRC) signaling, and a value of the bit is used for representing one of:

whether the PDCCHs of the one or more other terminals exist in the PDSCH transmitted to the terminal; or

25 whether the PDCCHs of the one or more other terminals exist in the PDSCH transmitted to the terminal, and whether resources in the PDSCH transmitted to the terminal are occupied by the one or more other terminals.

3. The method of claim 2, wherein,

when the value of the bit is 0, it is represented one of:

30 no PDCCH of the one or more other terminals exists in the PDSCH transmitted to the terminal; or

no PDCCH of the one or more other terminals exists in the PDSCH transmitted to the terminal, and no resource in the PDSCH transmitted to the

terminal is occupied by the one or more other terminals; and

when the value of the bit is 1, it is represented one of:

the PDCCHs of the one or more other terminals exist in the PDSCH transmitted to the terminal; or

5 the PDCCHs of the one or more other terminals exist in the PDSCH transmitted to the terminal, and the resources in the PDSCH transmitted to the terminal are occupied by the one or more other terminal.

4. The method of claim 3, wherein performing, by the terminal, the rate matching on
10 the PDSCH transmitted to the terminal comprises:

when the value of the bit is 1, removing, by the terminal, the resources occupied by the PDCCHs of the one or more other terminals from the PDSCH transmitted to the terminal and then performing the rate matching; and

15 when the value of the bit is 0 or after the terminal removes the resources occupied by the PDCCHs of the one or more other terminals from the PDSCH transmitted to the terminal, determining, by the terminal, whether the PDSCH transmitted to the terminal comprises a PDCCH configured to schedule the PDSCH according to preset correspondences between time-frequency resources of a PDSCH and time-frequency resources of a PDCCH configured to schedule the PDSCH,

20 when the PDSCH transmitted to the terminal comprises the PDCCH configured to schedule the PDSCH, removing, by the terminal, the PDCCH configured to schedule the PDSCH from the PDSCH transmitted to the terminal and then performing the rate matching, and

25 when no PDCCH configured to schedule the PDSCH exists in the PDSCH transmitted to the terminal, performing, by the terminal, the rate matching on the PDSCH transmitted to the terminal.

5. The method of claim 4, wherein removing, by the terminal, from the PDSCH transmitted to the terminal, the PDCCH configured to schedule the PDSCH comprises:

30 removing a control resource set (CORESET) corresponding to the PDCCH configured to schedule the PDSCH from the PDSCH transmitted to the terminal or removing a resource element (RE) occupied by the PDCCH configured to schedule the PDSCH from the PDSCH transmitted to the terminal according to a preset removal

strategy.

6. The method of claim 4, wherein removing, by the terminal, the resources occupied by the PDCCHs of the one or more other terminals from the PDSCH transmitted to the terminal comprises:

removing, by the terminal, resources occupied by CORESETs of the one or more other terminals from the PDSCH transmitted to the terminal.

7. The method of claim 1, wherein the indication information comprises N bits in the PDCCH signaling or the RRC signaling, wherein N is greater than 1, each bit corresponds to a respective one of the one or more other terminals, and each bit is to represent one of:

whether a PDCCH of the other terminal corresponding to the bit exists in the PDSCH transmitted to the terminal; or

whether a PDCCH of the other terminal corresponding to the bit exists in the PDSCH transmitted to the terminal, and whether a resource in the PDSCH transmitted to the terminal is occupied by the other terminal corresponding to the bit.

8. The method of claim 7, wherein,

when a value of the bit is 0, it is represented one of:

no PDCCH of the other terminal corresponding to the bit exists in the PDSCH transmitted to the terminal; or

no PDCCH of the other terminal corresponding to the bit exists in the PDSCH transmitted to the terminal, and no resource in the PDSCH transmitted to the terminal is occupied by the other terminal corresponding to the bit; and when the value of the bit is 1, it is represented one of:

the PDCCH of the other terminal corresponding to the bit exists in the PDSCH transmitted to the terminal; or

the PDCCH of the other terminal corresponding to the bit exists in the PDSCH transmitted to the terminal, and the resource in the PDSCH transmitted to the terminal is occupied by the other terminal corresponding to the bit.

9. The method of claim 8, wherein performing the rate matching on the PDSCH

transmitted to the terminal comprises:

traversing, by the terminal, values of all the bits;

when a value of at least one of all the bits is 1, by the terminal, removing a resource occupied by a PDCCH of the other terminal corresponding to the bit of which the value is 1 from the PDSCH transmitted to the terminal and then performing the rate matching; and

when the values of all the bits are 0 or after the terminal removes the resource occupied by the PDCCH of the other terminal corresponding to the bit of which the value is 1 from the PDSCH transmitted to the terminal, determining, by the terminal, whether the PDSCH transmitted to the terminal comprises a PDCCH configured to schedule the PDSCH according to preset correspondences between time-frequency resources of a PDSCH and time-frequency resources of a PDCCH configured to schedule the PDSCH,

when the PDSCH transmitted to the terminal comprises the PDCCH configured to schedule the PDSCH, removing, by the terminal, the PDCCH configured to schedule the PDSCH from the PDSCH transmitted to the terminal and then performing the rate matching, and

when no PDCCH configured to schedule the PDSCH exists in the PDSCH transmitted to the terminal, performing, by the terminal, the rate matching on the PDSCH transmitted to the terminal.

10. A network device, comprising:

a generation portion, configured to generate indication information for a target terminal, wherein the indication information is to indicate one of:

existence states of physical downlink control channels (PDCCHs) of one or more non-target terminals in a physical downlink shared channel (PDSCH) transmitted to the target terminal; or

existence states of PDCCHs of one or more non-target terminals in a PDSCH transmitted to the target terminal, and resource occupation states of the one or more non-target terminals in the PDSCH transmitted to the target terminal; and

a transmission portion, configured to transmit the indication information to the target terminal,

wherein the existence states indicate whether the PDCCHs of the one or more non-target terminals exist in the PDSCH transmitted to the target terminal, and the resource occupation states indicate whether resources in the PDSCH transmitted to the target terminal are occupied by the one or more non-target terminals.

5

11. A terminal, comprising:

a receiving portion, configured to receive indication information, wherein the indication information is to indicate one of:

10 existence states of physical downlink control channels (PDCCHs) of one or more other terminals in a physical downlink shared channel (PDSCH) transmitted to the terminal; or

 existence states of PDCCHs of one or more other terminals in a PDSCH transmitted to the terminal, and resource occupation states of the one or more other terminals in the PDSCH transmitted to the terminal; and

15 a rate matching portion, configured to perform rate matching on the PDSCH transmitted to the terminal based on the indication information,

 wherein the existence states indicate whether the PDCCHs of the one or more other terminals exist in the PDSCH transmitted to the terminal, and the resource occupation states indicate whether resources in the PDSCH transmitted to the terminal are occupied by the one or more other terminals.

20

12. The terminal of claim 11, wherein the indication information comprises one bit in PDCCH signaling or radio resource control (RRC) signaling, and a value of the bit is used for representing one of:

25 whether the PDCCHs of the one or more other terminals exist in the PDSCH transmitted to the terminal; or

 whether the PDCCHs of the one or more other terminals exist in the PDSCH transmitted to the terminal, and whether resources in the PDSCH transmitted to the terminal are occupied by the one or more other terminals.

30

13. The terminal of claim 12, wherein,

when the value of the bit is 0, it is represented one of:

no PDCCH of the one or more other terminals exists in the PDSCH

transmitted to the terminal; or

no PDCCH of the one or more other terminals exists in the PDSCH transmitted to the terminal, and no resource in the PDSCH transmitted to the terminal is occupied by the one or more other terminals; and

5 when the value of the bit is 1, it is represented one of:

the PDCCHs of the one or more other terminals exist in the PDSCH transmitted to the terminal; or

10 the PDCCHs of the one or more other terminals exist in the PDSCH transmitted to the terminal, and the resources in the PDSCH transmitted to the terminal are occupied by the one or more other terminals.

14. The terminal of claim 13, wherein the rate matching portion is configured to:

15 when the value of the bit is 1, remove the resources occupied by the PDCCHs of the one or more other terminals from the PDSCH transmitted to the terminal and then perform the rate matching; and

20 when the value of the bit is 0 or after the resources occupied by the PDCCHs of the one or more other terminals are removed from the PDSCH transmitted to the terminal, determine whether the PDSCH transmitted to the terminal comprises a PDCCH configured to schedule the PDSCH according to preset correspondences relationship between time-frequency resources of a PDSCH and time-frequency resources of a PDCCH configured to schedule the PDSCH,

25 when the PDSCH transmitted to the terminal comprises the PDCCH configured to schedule the PDSCH, remove the PDCCH configured to schedule the PDSCH from the PDSCH transmitted to the terminal and then perform the rate matching, and

when no PDCCH configured to schedule the PDSCH exists in the PDSCH transmitted to the terminal, perform the rate matching on the PDSCH transmitted to the terminal.

15. The terminal of claim 14, wherein the rate matching portion is configured to:

30 remove a control resource set (CORESET) corresponding to the PDCCH configured to schedule the PDSCH from the PDSCH transmitted to the terminal or remove a resource element (RE) occupied by the PDCCH configured to schedule the PDSCH from the PDSCH transmitted to the terminal according to a preset removal

strategy.

16. The terminal of claim 14, wherein the rate matching portion is configured to:

5 remove resources occupied by CORESETs of the one or more other terminals
from the PDSCH transmitted to the terminal.

17. The terminal of claim 11, wherein the indication information comprises N bits in
the PDCCH signaling or the RRC signaling, wherein N is greater than 1, each bit
corresponds to a respective one of the one or more other terminals, and each bit is to
10 represent one of:

 whether a PDCCH of the other terminal corresponding to the bit exists in the
PDSCH transmitted to the terminal; or

 whether a PDCCH of the other terminal corresponding to the bit exists in the
PDSCH transmitted to the terminal, and whether a resource in the PDSCH transmitted
15 to the terminal is occupied by the other terminal corresponding to the bit.

18. The terminal of claim 17, wherein,

 when a value of the bit is 0, it is represented one of:

20 no PDCCH of the other terminal corresponding to the bit exists in the
PDSCH transmitted to the terminal; or

 no PDCCH of the other terminal corresponding to the bit exists in the
PDSCH transmitted to the terminal, and no resource is occupied by the other
terminal corresponding to the bit; and

 when the value of the bit is 1, it is represented one of:

25 the PDCCH of the other terminal corresponding to the bit exists in the
PDSCH transmitted to the terminal; or

 the PDCCH of the other terminal corresponding to the bit exists in the
PDSCH transmitted to the terminal, and the resource in the PDSCH transmitted
to the terminal is occupied by the other terminal corresponding to the bit.

30

19. The terminal of claim 18, wherein the rate matching portion is configured to:

 traverse values of all the bits;

 when a value of at least one of all the bits is 1, remove a resource occupied by

a PDCCH of the other terminal corresponding to the bit of which the value is 1 from the PDSCH transmitted to the terminal and then perform the rate matching; and

when the values of all the bits are 0 or after the resource occupied by the PDCCH of the other terminal corresponding to the bit of which the value is 1 is removed from the PDSCH transmitted to the terminal, determine whether the PDSCH transmitted to the terminal comprises a PDCCH configured to schedule the PDSCH according to preset correspondences between time-frequency resources of a PDSCH and time-frequency resources of a PDCCH configured to schedule the PDSCH,

when the PDSCH transmitted to the terminal comprises the PDCCH configured to schedule the PDSCH, remove the PDCCH configured to schedule the PDSCH from the PDSCH transmitted to the terminal and then perform the rate matching, and

when no PDCCH configured to schedule the PDSCH exists in the PDSCH transmitted to the terminal, perform the rate matching on the PDSCH transmitted to the terminal.

20. The terminal of claim 19, wherein the rate matching portion is configured to:

remove a resource occupied by a CORESET of the other terminal corresponding to the bit of which the value is 1 from the PDSCH transmitted to the terminal.