

CLAIMS

What is claimed is:

1. A communication method, comprising:

5 determining, first configuration information based on a first condition, wherein the first configuration information comprises information indicating a first terminal device to monitor a physical downlink control channel PDCCH candidate based on a span, and comprises configuration information of a first PDCCH candidate and a second PDCCH candidate, and the first condition is that the first PDCCH candidate and the second PDCCH candidate do not meet at least one of a same control channel element CCE set, a same scrambling sequence, a same control
10 resource set, and a same downlink control information DCI payload size, wherein

the first PDCCH candidate and the second PDCCH candidate are located in a span other than a first span in a slot, the first PDCCH candidate and the second PDCCH candidate are located in the same span, the first PDCCH candidate is a PDCCH for individual transmission, and the second PDCCH candidate is any PDCCH candidate in linked PDCCH candidates for repetition
15 transmission; and

sending, the first configuration information to the first terminal device.

2. The method according to claim 1, wherein before the determining, first configuration information based on a first condition, the method further comprises:

receiving, first capability information from the first terminal device, wherein the first
20 capability information indicates that the first terminal device does not support to determine, in a span other than a first span, whether two PDCCH candidates have a same CCE set, a same scrambling sequence, a same control resource set, and a same DCI payload size.

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

receiving, second capability information from a second terminal device, wherein the second
25 capability information indicates that the second terminal device supports to determine, in a span other than a first span, whether two PDCCH candidates have a same CCE set, a same scrambling sequence, a same control resource set, and a same DCI payload size; and

determining, second configuration information based on the second capability information, wherein the second configuration information comprises indicating the second terminal device to
30 monitor a PDCCH candidate based on a span, and comprises configuration information of a third PDCCH candidate and a fourth PDCCH candidate, and the third PDCCH candidate and the fourth PDCCH candidate have a same CCE set, a same scrambling sequence, a same control resource set, and a same DCI payload size, wherein the third PDCCH candidate and the fourth PDCCH candidate are located in a span other than a first span in a slot, the third PDCCH candidate and the

fourth PDCCH candidate are located in the same span, the third PDCCH candidate is a PDCCH for individual transmission, and the fourth PDCCH candidate is any PDCCH candidate in linked PDCCH candidates for repetition transmission.

4. A communication method, comprising:

5 receiving, first configuration information from a network device, wherein the first configuration information comprises information indicating the first terminal device to monitor a physical downlink control channel PDCCH candidate based on a span, and comprises configuration information of a first PDCCH candidate and a second PDCCH candidate, and the first PDCCH candidate and the second PDCCH candidate do not meet at least one of a same control
10 channel element CCE set, a same scrambling sequence, a same control resource set, and a same downlink control information DCI payload size, wherein

the first PDCCH candidate and the second PDCCH candidate are located in a span other than a first span in a slot, the first PDCCH candidate and the second PDCCH candidate are located in the same span, the first PDCCH candidate is a PDCCH for individual transmission, and the second
15 PDCCH candidate is any PDCCH candidate in linked PDCCH candidates for repetition transmission; and

performing, monitoring separately on the first PDCCH candidate and the second PDCCH candidate.

5. The method according to claim 4, wherein before the receiving first configuration
20 information from a network device, the method further comprises:

sending, first capability information to the network device, wherein the first capability information indicates that the first terminal device does not support to determine, in a span other than a first span, whether two PDCCH candidates have a same CCE set, a same scrambling sequence, a same control resource set, and a same DCI payload size.

25 6. A communication method, comprising:

receiving, second configuration information from a network device, wherein the second configuration information comprises information indicating the second terminal device to monitor a physical downlink control channel PDCCH candidate based on a span, and comprises configuration information of a third PDCCH candidate and a fourth PDCCH candidate, and the
30 third PDCCH candidate and the fourth PDCCH candidate have a same time-frequency resource, a same scrambling sequence, a same control resource set, and a same downlink control information DCI payload size, wherein the third PDCCH candidate and the fourth PDCCH candidate are located in a span other than a first span in a slot, the third PDCCH candidate and the fourth PDCCH candidate are located in the same span, the third PDCCH candidate is a PDCCH for individual
35 transmission, and the fourth PDCCH candidate is any PDCCH candidate in linked PDCCH

candidates for repetition transmission;

determining, based on the second configuration information, that the third PDCCH candidate and the fourth PDCCH candidate meet some conditions of a same time-frequency resource, a same scrambling sequence, a same control resource set, and a same DCI payload size; and

5 performing, decoding on the third PDCCH candidate and/or the fourth PDCCH candidate.

7. The method according to claim 6, wherein before the receiving, by a second terminal device, second configuration information from a network device, the method further comprises:

10 sending, second capability information to the network device, wherein the second capability information indicates that the second terminal device supports to determine, in a span other than a first span, whether two PDCCH candidates have a same time-frequency resource, a same scrambling sequence, a same control resource set, and a same DCI payload size.

8. The method according to claim 6 or 7, wherein some conditions of a same time-frequency resource, a same scrambling sequence, a same control resource set, and a same DCI payload size, that the third PDCCH candidate and the fourth PDCCH candidate meet, are conditions determined
15 by the network device and the second terminal device through negotiation, or conditions predefined in a communication protocol.

9. A communication apparatus, comprising:

20 a processing unit, configured to determine first configuration information based on a first condition, wherein the first configuration information comprises information indicating a first terminal device to monitor a physical downlink control channel PDCCH candidate based on a span, and comprises configuration information of a first PDCCH candidate and a second PDCCH candidate, and the first condition is that the first PDCCH candidate and the second PDCCH candidate do not meet at least one of a same control channel element CCE set, a same scrambling sequence, a same control resource set, and a same downlink control information DCI payload size,
25 wherein

the first PDCCH candidate and the second PDCCH candidate are located in a span other than a first span in a slot, the first PDCCH candidate and the second PDCCH candidate are located in the same span, the first PDCCH candidate is a PDCCH for individual transmission, and the second PDCCH candidate is any PDCCH candidate in linked PDCCH candidates for repetition
30 transmission; and

a transceiver unit, configured to send the first configuration information to the first terminal device.

10. The apparatus according to claim 9, wherein the transceiver unit is further configured to:

35 before the processing unit determines the first configuration information based on the first condition, receive first capability information from the first terminal device, wherein the first

capability information indicates that the first terminal device does not support to determine, in a span other than a first span, whether two PDCCH candidates have a same CCE set, a same scrambling sequence, a same control resource set, and a same DCI payload size.

11. The apparatus according to claim 9 or 10, wherein the transceiver unit is further configured to:

receive second capability information from a second terminal device, wherein the second capability information indicates that the second terminal device supports to determine, in a span other than a first span, whether two PDCCH candidates have a same CCE set, a same scrambling sequence, a same control resource set, and a same DCI payload size; and

the processing unit is further configured to:

determine second configuration information based on the second capability information, wherein the second configuration information comprises indicating the second terminal device to monitor a PDCCH candidate based on a span, and comprises configuration information of a third PDCCH candidate and a fourth PDCCH candidate, and the third PDCCH candidate and the fourth PDCCH candidate have a same CCE set, a same scrambling sequence, a same control resource set, and a same DCI payload size, wherein the third PDCCH candidate and the fourth PDCCH candidate are located in a span other than a first span in a slot, the third PDCCH candidate and the fourth PDCCH candidate are located in the same span, the third PDCCH candidate is a PDCCH for individual transmission, and the fourth PDCCH candidate is any PDCCH candidate in linked PDCCH candidates for repetition transmission.

12. A communication apparatus, comprising:

a transceiver unit, configured to receive first configuration information from a network device, wherein the first configuration information comprises information indicating a first terminal device to monitor a physical downlink control channel PDCCH candidate based on a span, and comprises configuration information of a first PDCCH candidate and a second PDCCH candidate, and the first PDCCH candidate and the second PDCCH candidate do not meet at least one of a same control channel element CCE set, a same scrambling sequence, a same control resource set, and a same downlink control information DCI payload size, wherein

the first PDCCH candidate and the second PDCCH candidate are located in a span other than a first span in a slot, the first PDCCH candidate and the second PDCCH candidate are located in the same span, the first PDCCH candidate is a PDCCH for individual transmission, and the second PDCCH candidate is any PDCCH candidate in linked PDCCH candidates for repetition transmission; and

a processing unit, configured to perform monitoring separately on the first PDCCH candidate and the second PDCCH candidate.

13. The apparatus according to claim 12, wherein before receiving the first configuration information from the network device, the transceiver unit is further configured to:

send first capability information to the network device, wherein the first capability information indicates that the first terminal device does not support to determine, in a span other than a first span, whether two PDCCH candidates have a same CCE set, a same scrambling sequence, a same control resource set, and a same DCI payload size.

14. A communication apparatus, comprising:

a transceiver unit, configured to receive second configuration information from a network device, wherein the second configuration information comprises information indicating the second terminal device to monitor a physical downlink control channel PDCCH candidate based on a span, and comprises configuration information of a third PDCCH candidate and a fourth PDCCH candidate, and the third PDCCH candidate and the fourth PDCCH candidate have a same time-frequency resource, a same scrambling sequence, a same control resource set, and a same downlink control information DCI payload size, wherein the third PDCCH candidate and the fourth PDCCH candidate are located in a span other than a first span in a slot, the third PDCCH candidate and the fourth PDCCH candidate are located in the same span, the third PDCCH candidate is a PDCCH for individual transmission, and the fourth PDCCH candidate is any PDCCH candidate in linked PDCCH candidates for repetition transmission; and

a processing unit, configured to determine, based on the second configuration information, that the third PDCCH candidate and the fourth PDCCH candidate meet some conditions of a same time-frequency resource, a same scrambling sequence, a same control resource set, and a same DCI payload size; and

perform decoding on the third PDCCH candidate and/or the fourth PDCCH candidate.

15. The apparatus according to claim 14, wherein before receiving the second configuration information from the network device, the transceiver unit is further configured to:

send second capability information to the network device, wherein the second capability information indicates that the second terminal device supports to determine, in a span other than a first span, whether two PDCCH candidates have a same time-frequency resource, a same scrambling sequence, a same control resource set, and a same DCI payload size.

16. The apparatus according to claim 14 or 15, wherein some conditions of a same time-frequency resource, a same scrambling sequence, a same control resource set, and a same DCI payload size, that the third PDCCH candidate and the fourth PDCCH candidate meet, are conditions determined by the network device and the second terminal device through negotiation, or conditions predefined in a communication protocol.

17. A chip, wherein the chip is coupled to a memory, and is configured to read and execute

program instructions stored in the memory, to implement the method according to any one of claims 1 to 3, the method according to either of claims 4 and 5, or the method according to any one of claims 6 to 8.

5 18. A computer-readable storage medium, wherein the computer-readable storage medium stores computer-executable instructions, and when the computer-executable instructions are invoked by a computer, the method according to any one of claims 1 to 3, the method according to either of claims 4 and 5, or the method according to any one of claims 6 to 8 is performed.

10 19. A computer program product, comprising instructions, wherein when the instructions are run on a computer, the method according to any one of claims 1 to 3, the method according to either of claims 4 and 5, or the method according to any one of claims 6 to 8 is performed.