METHOD AND FOR CONFIGURING FREQUENCY-DOMAIN RESOURCE, COMMUNICATION DEVICE AND STORAGE MEDIUM

TECHNICAL FIELD

[0001] The present disclosure relates to the technical field of communication, and more particularly relates to a method and an apparatus for configuring frequency domain resources, and a communication device.

BACKGROUND

[0002] In the related art, a control resource set (CORESET) of a terminal occupies 1 to 3 continuous symbols in a time domain, and frequency domain resources are configured in a frequency domain in a way similar to a physical downlink shared channel (PDSCH) resource allocation type 0 (i.e., PDSCH resource allocation type 0).

[0003] In Release 18, it is proposed that a bandwidth is further reduced for a reduced capability (RedCap) terminal to support a service type which is not high in data rate and is sensitive to manufacturing cost, such as a factory sensor. At the same time, configuration for sub-carrier spacings such as 15KHz and 30KHz may still be supported, resulting in a reduction in available frequency domain resources within a bandwidth range. If the method for allocating CORESET frequency domain resources in the related art is still used, it may result in that a part of frequency domain resources within the bandwidth range may never be utilized.

SUMMARY

[0004] According to a first aspect of embodiments of the present disclosure, a method for configuring frequency domain resources is provided, which is performed by a terminal. The method includes: receiving first indication information from a network device; and determining, based on the first indication information, frequency domain resources occupied by a control resource set (CORESET), in which a first frequency domain resource in the frequency domain resources occupied by the CORESET is outside a bandwidth supported by the terminal.

[0005] Optionally, the method further includes: determining, based on second indication information, the first frequency domain resource outside the bandwidth supported by the terminal from the frequency domain resources occupied by the CORESET; in which the second indication information includes at least one of: a number of physical downlink control channel (PDCCH)

WHAT IS CLAIMED IS:

1. A method for configuring frequency domain resources, performed by a terminal, the method comprising:

receiving first indication information from a network device; and

determining, based on the first indication information, frequency domain resources occupied by a control resource set (CORESET), wherein a first frequency domain resource in the frequency domain resources occupied by the CORESET is outside a bandwidth supported by the terminal.

2. The method according to claim 1, further comprising:

determining, based on second indication information, the first frequency domain resource outside the bandwidth supported by the terminal from the frequency domain resources occupied by the CORESET; and

wherein the second indication information comprises at least one of: a number of physical downlink control channel (PDCCH) candidates, a number of resource element groups (REGs) in a REG bundle, or a cyclic shift parameter of the REG bundle.

3. The method according to claim 2, wherein determining, based on second indication information, the first frequency domain resource outside the bandwidth supported by the terminal from the frequency domain resources occupied by the CORESET comprises:

determining, based on each control channel element (CCE) index, a target CCE from at least one CCE to which the REG is mapped, wherein a REG frequency domain corresponding to the target CCE occupies at least one frequency domain resource unit;

in response to determining that the at least one frequency domain resource unit where the REG frequency domain corresponding to the target CCE is located comprises a frequency domain resource unit with a lowest frequency in the frequency domain resources occupied by the CORESET, determining that at least the frequency domain resource unit with the lowest frequency is the first frequency domain resource outside the bandwidth supported by the terminal; and

in response to determining that the at least one frequency domain resource unit where the REG frequency domain corresponding to the target CCE is located comprises a frequency domain resource unit with a highest frequency in the frequency domain resources occupied by the CORESET, determining that at least the frequency domain resource unit with the highest frequency is the first frequency domain resource outside the bandwidth supported by the terminal.

4. The method according to claim 2, wherein determining, based on second indication

information, the first frequency domain resource outside the bandwidth supported by the terminal from the frequency domain resources occupied by the CORESET comprises:

determining, based on the number of PDCCH candidates, at least one CCE that is not mapped to the PDCCH candidates; and

determining that at least one of a set number of frequency domain resource units with a highest frequency position or a set number of frequency domain resource units with a lowest frequency position in the at least one CCE that is not mapped to the PDCCH candidates are the first frequency domain resource outside the bandwidth supported by the terminal.

5. The method according to claim 1, wherein

a frequency domain resource unit with a lowest frequency in the frequency domain resources occupied by the CORESET is aligned with a frequency domain resource unit with a lowest frequency in the bandwidth supported by the terminal; or

a frequency domain resource unit with a highest frequency in the frequency domain resources occupied by the CORESET is aligned with a frequency domain resource unit with a highest frequency in the bandwidth supported by the terminal.

6. The method according to claim 1, wherein

the CORESET is CORESET#0, the first indication information is remaining minimum system information (RMSI), and the first indication information is configured to determine a frequency domain resource length for the CORESET#0 and a corresponding number of symbols for the CORESET#0 from at least one combination of a frequency domain resource length and a corresponding number of symbols agreed by a protocol.

7. A method for configuring frequency domain resources, performed by a network device, the method comprising:

sending first indication information to a terminal;

wherein the first indication information is configured to determine frequency domain resources occupied by a control resource set (CORESET), and a first frequency domain resource in the frequency domain resources occupied by the CORESET is outside a bandwidth supported by the terminal.

8. The method according to claim 7, wherein

a frequency domain resource unit with a lowest frequency in the frequency domain resources occupied by the CORESET is aligned with a frequency domain resource unit with a lowest

frequency in the bandwidth supported by the terminal; or

a frequency domain resource unit with a highest frequency in the frequency domain resources occupied by the CORESET is aligned with a frequency domain resource unit with a highest frequency in the bandwidth supported by the terminal.

9. The method according to claim 7, wherein

the CORESET is CORESET#0, the first indication information is remaining minimum system information (RMSI), and the first indication information is configured to determine a frequency domain resource length for the CORESET#0 and a corresponding number of symbols for the CORESET#0 from at least one combination of a frequency domain resource length and a corresponding number of symbols agreed by a protocol.

10. A communication device, comprising: a processor, and a memory storing a computer program; wherein when the computer program is executed by the processor, the device is caused to perform the method according to any one of claims 1 to 6.

11. A communication device, comprising: a processor, and a memory storing a computer program; wherein when the computer program is executed by the processor, the device is caused to perform the method according to any one of claims 7 to 9.

12. A non-transitory computer-readable storage medium for storing instructions which, when executed by a processor, are capable of implementing the method according to any one of claims 1 to 6.

13. A non-transitory computer-readable storage medium for storing instructions which, when executed by a processor, are capable of implementing the method according to any one of claims 7 to 9.