

RESOURCE INDICATION METHOD, AND DATA RECEIVING METHOD AND APPARATUS

This application claims priority to Chinese Patent Application No. 201910733945.7 filed with the China National Intellectual Property Administration (CNIPA) on Aug. 7, 2019, the disclosure of which is incorporated herein by reference in its entirety.

5 TECHNICAL FIELD

The present application relates to the field of communications, for example, a resource indication method, a resource indication apparatus, a data receiving method and a data receiving apparatus.

BACKGROUND

Machine-type communication (MTC) is also referred to as machine-to-machine (M2M). MTC and
10 Narrow Band Internet of Things (NB-IoT) are main application forms of the Internet of Things. In the related art, an MTC terminal based on Long-Term Evolution/Long Term Evolution Advanced (LTE/LTE-A) is generally deployed under a same system bandwidth as a legacy LTE/LTE-A terminal. An NB-IoT terminal uses inband and guard band deployment methods and is also deployed in the same system bandwidth as the legacy LTE/LTE-A terminal. As the legacy LTE/LTE-A terminal withdraws from the
15 market, an LTE spectrum in the related art will be replaced by the 5th generation mobile networks (5G) New Radio (NR).

In the case of a limited coexistence system bandwidth, LTE-MTC/NB-IoT and NR systems cannot each enjoy independent frequency domain regions within the coexistence system bandwidth. In this case, the LTE-MTC/NB-IoT and NR systems will share the same frequency domain resources. Since the MTC
20 terminal and the NB-IoT terminal based on the LTE/LTE-A have a service life of at least ten years, a long time of coexistence of an MTC system based on the LTE/LTE-A (an LTE-MTC system for short) or an NB-IoT system and an NR system is required. How to ensure the performance of a coexistence system in the case of the limited coexistence system bandwidth is a problem that needs to be solved.

SUMMARY

25 Embodiments of the present application provide solutions described below.

Embodiments A first aspect of the present application provides a resource indication method, which includes:

transmitting first indication signaling to a terminal;

wherein the first indication signaling includes time domain reservation period information, time domain offset information, and reserved time domain resource information reserved in a time domain reservation period corresponding to the time domain reservation period information, the time domain resource information used ~~for indicating~~to indicate that ~~first a corresponding~~ time domain resource is not allowed to be used for transmission, wherein a time domain resource reserved in the time domain reservation period is represented by a time domain reservation bitmap, wherein the time domain reservation bitmap comprises: a slot reservation bitmap used to indicate a reserved slot in the time domain reservation period; and a reservation symbol bitmap used to indicate a reserved symbol in the time domain reservation period.

A second aspect of the present application provides an apparatus comprising: a memory storing a plurality of instructions; and a processor configured to execute the plurality of instructions, and upon execution of the plurality of instructions, is configured to: receive first indication signaling from a base station; wherein the first indication signaling comprises: time domain reservation period information, time domain offset information, and time domain resource information reserved in a time domain reservation period corresponding to the time domain reservation period information, the time domain resource information used to indicate that a corresponding time domain resource is not allowed to be used for transmission, wherein a time domain resource reserved in the time domain reservation period is represented by a time domain reservation bitmap, wherein the time domain reservation bitmap comprises: a slot reservation bitmap used to indicate a reserved slot in the time domain reservation period; and a reservation symbol bitmap used to indicate a reserved symbol in the time domain reservation period.

A third aspect of the present application provides an apparatus comprising: a memory storing a plurality of instructions; and a processor configured to execute the plurality of instructions, and upon execution of the plurality of instructions, is configured to: transmit first indication signaling to a terminal; wherein the first indication signaling comprises: time domain reservation period information, time domain offset information, and time domain resource information reserved in a time domain reservation period corresponding to the time domain reservation period information, the time domain resource information used to indicate that a corresponding time domain resource is not allowed to be used for transmission, wherein a time domain resource reserved in the time domain reservation period is represented by a time domain reservation bitmap, wherein the time domain reservation bitmap comprises: a slot reservation bitmap used to indicate a reserved slot in the time domain reservation

period; and a reservation symbol bitmap used to indicate a reserved symbol in the time domain reservation period.

5 In an implementation, the first indication signaling includes time domain reservation period information and time domain offset information, and time domain resource information reserved in a time domain reservation period corresponding to the time domain reservation period information.

10 In an implementation, time domain resource reserved in the time domain reservation period is represented by a time domain reservation bitmap; and a time domain offset corresponding to the time domain offset information is a distance between a subframe where a starting position of the time domain reservation bitmap in the time domain reservation period is located and a start of the time domain reservation period.

In an implementation, the time domain reservation period information and the time domain offset information are jointly coded or independently coded.

In an implementation, the time domain reservation period information and the time domain offset information are jointly indicated through 6 bits.

15 In an implementation, the time domain reservation period information and the time domain offset information are respectively indicated; where the time domain reservation period information is indicated through 3 bits; and the time domain offset information is indicated through 5 bits.

In an implementation, the time domain reservation bitmap includes a slot reservation bitmap used for indicating a reserved slot in the time domain reservation period.

20 In an implementation, in a case where a bit corresponding to the slot reservation bitmap is set to a first value, a symbol actually reserved in a slot is determined according to a parity of a slot index.

In an implementation, a length of the slot reservation bitmap is 4 bits or 10 bits

In an implementation, the time domain reservation bitmap includes a reservation symbol bitmap used for indicating a reserved symbol in the time domain reservation period.

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