

WHAT IS CLAIMED IS:

1. A method for indicating frequency-domain information of a common control resource set (CORESET) of remaining minimum system information (RMSI), for applying to a base station, the method comprising:

adding indication information included in ~~into~~ a physical broadcast channel (PBCH) of a synchronization signal block (SSB), the indication information comprising first indication information,

in response to ~~and~~ the first indication information being configured to indicate ~~that whether~~ a CORESET of RMSI corresponding to the SSB and the SSB are ~~time division multiplexed or frequency division multiplexed~~;

the indication information further comprises second indication information, and the second indication information is configured to indicate the bandwidth part where the CORESET of the RMSI corresponding to the SSB is located is different from the bandwidth part where the SSB is located; or

the indication information further comprises third indication information, and the third indication information is configured to indicate the bandwidth part where the CORESET of the RMSI corresponding to the SSB is located is same as the bandwidth part where the SSB is located, and indicate an offset between the CORESET of the RMSI corresponding to the SSB and the SSB;

in response to the first indication information being configured to indicate that the CORESET of the RMSI corresponding to the SSB and the SSB are time division multiplexed, a center frequency of the CORESET of the RMSI corresponding to the SSB and a center frequency of the SSB are same;

wherein the bandwidth part refers to a resource unit with a certain frequency region of a frequency band; and

sending the SSB including the indication information and the CORESET of the RMSI to user equipment (UE) in a beam scanning manner.

2. The method of claim 1, wherein, ~~in response to the first indication information is configured to indicate all frequency-domain positional relationships between indicating that the CORESET of the RMSI corresponding to the SSB and the SSB are frequency division multiplexed, the indication information further comprises second indication information, and the second indication information is configured to indicate a bandwidth part where the CORESET of the RMSI is located; wherein the bandwidth part where the CORESET of the RMSI is located is different from a bandwidth part where the SSB is located, and the bandwidth part refers to a resource unit with a certain frequency region of a frequency band.~~

3. The method of claim 1, wherein the offset between the CORESET of the RMSI corresponding to the SSB and the SSB is a number of resource elements (REs) within a gap in the frequency domain between a low-frequency RE of the SSB and a high-frequency RE of the CORESET of the RMSI.

4. The method of claim 1, wherein the offset between the CORESET of the RMSI corresponding to the SSB and the SSB is a number of REs within a gap in the frequency domain between a high-frequency RE of the SSB and a low-frequency RE of the CORESET of the RMSI.

~~3. The method of claim 1, wherein, in response to the first indication information indicating that the CORESET of the RMSI corresponding to the SSB and the SSB are frequency division multiplexed, the indication information further comprises third indication information, and the third indication information is configured to indicate that a number of REs within a gap in the frequency domain between a low frequency resource element (RE) of the SSB and a high frequency RE of the CORESET of the RMSI is a first set value or a number of REs within a gap in the frequency domain between a high frequency RE of the SSB and a low frequency RE of the CORESET of the RMSI is a second set value.~~

~~4. The method of claim 3, wherein the first set value is 0, and the second set value is 0.~~

5. A method for ~~obtaining searching for~~ a common control resource set (CORESET) of remaining minimum system information (RMSI), for applying to user equipment (UE), ~~the method comprises~~:

receiving a synchronization signal block (SSB) including indication information from a base station, the indication information comprising first indication information,

~~in response to~~ and the first indication information being configured to indicate ~~whether that~~ a CORESET of RMSI corresponding to the SSB and the SSB are ~~time division multiplexed or~~ frequency division multiplexed;

~~the indication information further comprises second indication information, and the second indication information is configured to indicate the bandwidth part where the CORESET of the RMSI corresponding to the SSB is located is different from the bandwidth part where the SSB is located; or~~

~~the indication information further comprises third indication information, and the third indication information is configured to indicate the bandwidth part where the CORESET of the RMSI corresponding to the SSB is located is same as the bandwidth part where the SSB is located, and indicate an offset between the CORESET of the RMSI corresponding to the SSB and the SSB;~~

~~in response to the first indication information being configured to indicate that the CORESET of the RMSI corresponding to the SSB and the SSB are time division multiplexed, a center frequency of the CORESET of the RMSI corresponding to the SSB and a center frequency of the SSB are same;~~

~~wherein the bandwidth part refers to a resource unit with a certain frequency region of a frequency band; and~~

obtaining the indication information ~~by parsing from~~ the SSB, and searching for the CORESET of the RMSI in a corresponding frequency region according to the indication information.

6. ~~The method of claim 5, wherein the first indication information is configured to indicate all frequency-domain positional relationships between the CORESET of the RMSI~~

corresponding to the SSB and the SSB.

~~6. The method of claim 5, wherein, in response to the first indication information indicating that the CORESET of the RMSI corresponding to the SSB and the SSB are time division multiplexed, the searching for the CORESET of the RMSI in the corresponding frequency region according to the indication information comprises:~~

~~searching for the CORESET of the RMSI according to a center frequency where the SSB is located.~~

~~7. The method of claim 5, wherein, in response to the indication information further comprising second indication information configured to indicate that a bandwidth part where the CORESET of the RMSI is located, and the bandwidth part where the CORESET of the RMSI is located is different from a bandwidth part where the SSB is located, the searching for the CORESET of the RMSI in the corresponding frequency region according to the indication information comprises:~~

~~searching for the CORESET of the RMSI in a bandwidth part except the bandwidth part corresponding to the received SSB, the bandwidth part referring to a resource unit with a certain frequency region of a frequency band.~~

~~87. The method of claim 5, wherein the offset between the CORESET of the RMSI corresponding to the SSB and the SSB is a number of resource elements (REs), in response to the indication information further comprising third indication information configured to indicate that a number of REs within a gap in the frequency domain between a low-frequency resource element (RE) of the SSB and a high-frequency RE of the CORESET of the RMSI is a first set value;₂ the searching for the CORESET of the RMSI in the corresponding frequency region according to the indication information comprises:~~

~~searching for the CORESET of the RMSI in a frequency region lower than that corresponding to the received SSB.~~

98. The method of claim 5, wherein ~~the offset between the CORESET of the RMSI corresponding to the SSB and the SSB is~~, in response to the indication information further comprising ~~third indication information configured to indicate that a number of REs within a gap in the frequency domain between a high-frequency RE of the SSB and a low-frequency RE of the CORESET of the RMSI is a second set value;~~ the searching for the CORESET of the RMSI in the corresponding frequency region according to the indication information comprises:

searching for the CORESET of the RMSI in a frequency region higher than a frequency region corresponding to the received SSB.

10. ~~A device for indicating frequency domain information of a common control resource set (CORESET) of remaining minimum system information (RMSI), applied to a base station, comprising:~~

~~an addition module, configured to add indication information into a physical broadcast channel (PBCH) of a synchronization signal block (SSB), the indication information comprising first indication information and the first indication information being configured to indicate whether a CORESET of RMSI corresponding to the SSB and the SSB are time division multiplexed or frequency division multiplexed; and~~
~~a sending module, configured to send the SSB including the indication information added by the addition module and the CORESET of the RMSI to UE in a beam scanning manner.~~

11. ~~The device of claim 10, wherein, in response to the first indication information indicating that the CORESET of the RMSI corresponding to the SSB and the SSB are frequency division multiplexed, the indication information further comprises second indication information, and the second indication information is configured to indicate a bandwidth part where the CORESET of the RMSI is located; wherein the bandwidth part where the CORESET of the RMSI is located is different from a bandwidth part where the SSB is located, and the bandwidth part refers to a resource unit with a certain frequency~~

~~region of a frequency band.~~

~~12. The device of claim 10, wherein, in response to the first indication information indicating that the CORESET of the RMSI corresponding to the SSB and the SSB are frequency division multiplexed, the indication information further comprises third indication information, and the third indication information is configured to indicate that a number of REs within a gap in the frequency domain between a low frequency resource element (RE) of the SSB and a high frequency RE of the CORESET of the RMSI is a first set value or a number of REs within a gap in the frequency domain between a high frequency RE of the SSB and a low frequency RE of the CORESET of the RMSI is a second set value.~~

~~13. The device of claim 12, wherein the first set value is 0, and the second set value is 0.~~

~~14. A device for searching for a common control resource set (CORESET) of remaining minimum system information (RMSI), applied to user equipment (UE), comprising:~~

~~a receiving module, configured to receive a synchronization signal block (SSB) including indication information from a base station, the indication information comprising first indication information and the first indication information being configured to indicate whether a CORESET of RMSI corresponding to the SSB and the SSB are time division multiplexed or frequency division multiplexed; and~~

~~a parsing and searching module, configured to obtain the indication information by parsing the SSB received by the receiving module, and search for the CORESET of the RMSI in a corresponding frequency region according to the indication information.~~

~~15. The device of claim 14, wherein, in response to the first indication information indicating that the CORESET of the RMSI corresponding to the SSB and the SSB are time division multiplexed, the parsing and searching module comprises:~~

~~a first searching unit, configured to search for the CORESET of the RMSI according to a center frequency where the SSB is located.~~

16. ~~The device of claim 14, wherein, in response to the indication information further comprising second indication information configured to indicate a bandwidth part where the CORESET of the RMSI is located, and the bandwidth part where the CORESET of the RMSI is located is different from a bandwidth part where the SSB is located, the parsing and searching module comprises:~~

~~a second searching unit, configured to search for the CORESET of the RMSI in a bandwidth part except the bandwidth part corresponding to the received SSB, the bandwidth part refers to a resource unit with a certain frequency region of a frequency band.~~

17. ~~The device of claim 14, wherein, in response to the indication information further comprising third indication information configured to indicate that a number of REs within a gap in the frequency domain between a low frequency resource element (RE) of the SSB and a high frequency RE of the CORESET of the RMSI is a first set value, the parsing and searching module comprises:~~

~~a third searching unit, configured to search for the CORESET of the RMSI in a frequency region lower than that corresponding to the received SSB.~~

18. ~~The device of claim 14, wherein, in response to the indication information further comprising third indication information configured to indicate that a number of REs within a gap in the frequency domain between a high frequency RE of the SSB and a low frequency RE of the CORESET of the RMSI is a second set value, the parsing and searching module comprises:~~

~~a fourth searching unit, configured to search for the CORESET of the RMSI in a frequency region higher than a frequency region corresponding to the received SSB.~~

19. ~~A base station, comprising:~~

~~a processor; and~~

~~a memory configured to store instructions executable for the processor,
wherein the processor is configured to:
add indication information into a physical broadcast channel (PBCH) of a
synchronization signal block (SSB), the indication information comprising first
indication information and the first indication information being configured to indicate
whether a control resource set (CORESET) of remaining minimum system information
(RMSI) corresponding to the SSB and the SSB are time division multiplexed or
frequency division multiplexed; and
send the SSB including the indication information and the CORESET of the RMSI to
user equipment (UE) in a beam scanning manner.~~

920. User equipment (UE), ~~the UE comprises~~ing:

a processor; and

a memory configured to store instructions executable for the processor,

wherein the processor is configured to:

receive a synchronization signal block (SSB) including indication information from a
base station, the indication information comprising first indication information,

in response to ~~and~~ the first indication information being configured to indicate that
~~whether~~ a control resource set (CORESET) of remaining minimum system information
(RMSI) corresponding to the SSB and the SSB are time division multiplexed or
frequency division multiplexed;

the indication information further comprises second indication information, and the
second indication information is configured to indicate the bandwidth part where the
CORESET of the RMSI corresponding to the SSB is located is different from the
bandwidth part where the SSB is located; or

the indication information further comprises third indication information, and the third
indication information is configured to indicate the bandwidth part where the CORESET
of the RMSI corresponding to the SSB is located is same as the bandwidth part where
the SSB is located, and indicate an offset between the CORESET of the RMSI

corresponding to the SSB and the SSB;

in response to the first indication information being configured to indicate that the CORESET of the RMSI corresponding to the SSB and the SSB are time division multiplexed, a center frequency of the CORESET of the RMSI corresponding to the SSB and a center frequency of the SSB are same;

wherein the bandwidth part refers to a resource unit with a certain frequency region of a frequency band; and

obtain the indication information from ~~by parsing~~ the SSB, and search for the CORESET of the RMSI in a corresponding frequency region according to the indication information.

~~21. A computer readable storage medium, in which computer instructions are stored, the instructions being executed by a processor to implement the steps of the method for indicating the frequency-domain information of the common control resource set (CORESET) of the remaining minimum system information (RMSI) of claim 1.~~

~~22. A computer readable storage medium, in which computer instructions are stored, the instructions being executed by a processor to implement the steps of the method for searching for the common control resource set (CORESET) of the remaining minimum system information (RMSI) of claim 5.~~