

WHAT IS CLAIMED IS:

1. A synchronization signal block information processing method, applied in shared spectrum channel access, the method comprising:

obtaining, by a terminal device, identifiers of multiple SS/PBCH blocks (SSBs), wherein the identifier of the SSB is determined in accordance with demodulation reference signal (DMRS) sequences of physical broadcast channels (PBCHs), and the identifier of the SSB is used for indicating a transmission position of the SSB within a set period of time;

obtaining, by the terminal device, first indication information, wherein the first indication information is used for indicating a first quantity and comprises n , and the first quantity is obtained by rounding up ~~no more than~~ a number of ~~the~~ SSBs sent by a network device within the set period of time up to n^{th} power of 2, wherein n is an integer greater than or equal to 0; and

determining, by the terminal device, that a first SSB in the multiple SSBs and a second SSB in the multiple SSBs are quasi-co-located (QCL) in accordance with an identifier of the first SSB, an identifier of the second SSB and the first quantity~~indication information~~.

2. The method according to claim 1, wherein the identifier of the first SSB and the identifier of the second SSB are SSB numbers, and

wherein the determining, by the terminal device, that the first SSB in the multiple SSBs and the second SSB in the multiple SSBs are quasi-co-located (QCL) in accordance with the identifier of the first SSB, the identifier of the second SSB and the first quantity~~indication information~~ comprises:

determining that the first SSB and the second SSB are QCL when a result of the SSB number of the first SSB mod the first quantity is equal to a result of the SSB number of the second SSB mod the first quantity.

~~3. The method according to claim 1 or 2, wherein the first indication information comprises the number of the sent SSBs, and the first quantity is the number of the sent SSBs;~~

or

wherein the first indication information comprises n , and the first quantity is obtained by rounding up the number of the sent SSBs up to n th power of 2, wherein n is an integer greater than or equal to 0.

43. The method according to ~~any one of claims 1-3~~ claim 1 or claim 2, wherein the first indication information is indicated by a master information block (MIB), a system information block (SIB) or a radio resource control (RRC) message.

54. The method according to claim 43, wherein one piece of the first indication information is carried in the SIB message, and the piece of the first indication information is for all cells at a frequency point corresponding to the SIB message.

65. The method according to claim 54, wherein the determining, by the terminal device, that the first SSB in the multiple SSBs and the second SSB in the multiple SSBs are quasi-co-located (QCL) in accordance with the identifier of the first SSB, the identifier of the second SSB and the first quantity~~indication information~~ is for all the cells at the frequency point corresponding to the SIB message.

76. The method according to claim 43, wherein the first indication information is carried in a first indication information list of the SIB message, the first indication information list comprises multiple pieces of first indication information, and each piece of first indication information corresponds to one or more cells.

87. The method according to claim 76, wherein the determining, by the terminal device, that the first SSB in the multiple SSBs and the second SSB in the multiple SSBs are quasi-co-located (QCL) in accordance with the identifier of the first SSB, the identifier of the second SSB and the first quantity~~indication information~~ is for all the cells at a frequency point corresponding to the SIB message.

98. The method according to claim 43, wherein the RRC message comprises an RRC reconfiguration message, and

wherein one piece of the first indication information is carried in the RRC

reconfiguration message, and the piece of the first indication information is for all cells at a frequency point corresponding to the RRC reconfiguration message.

~~109~~. The method according to claim ~~98~~, wherein the determining, by the terminal device, ~~that~~ the first SSB in the multiple SSBs and the second SSB in the multiple SSBs are quasi-co-located (QCL) in accordance with the identifier of the first SSB, the identifier of the second SSB and the first ~~quantityindication information~~ is for all the cells at the frequency point corresponding to the RRC reconfiguration message.

~~110~~. The method according to claim ~~43~~, wherein the RRC message comprises an RRC reconfiguration message, and

wherein the first indication information is carried in a first indication information list of the RRC reconfiguration message, the first indication information list comprises multiple pieces of first indication information, and each piece of first indication information corresponds to one or more cells.

~~111~~. The method according to claim ~~110~~, wherein the determining, by the terminal device, ~~that~~ the first SSB in the multiple SSBs and the second SSB in the multiple SSBs are quasi-co-located (QCL) in accordance with the identifier of the first SSB, the identifier of the second SSB and the first ~~quantityindication information~~ is for all the cells at a frequency point corresponding to the RRC reconfiguration message

~~112~~. The method according to ~~any one of claims 1-3~~claim 1 or claim 2, wherein the first SSB and the second SSB are within a same set period of time, or in different set periods of time.

~~113~~. The method according to ~~any one of claims 1-3~~claim 1 or claim 2, wherein the set period of time is half of a frame period, or 2ms, 4ms, or 8ms.

~~114~~. A synchronization signal block information processing method, applied in shared spectrum channel access, the method comprising:

indicating, by a network device, first indication information to a terminal device, wherein the first indication information is used for indicating a first quantity and comprises n,

the first quantity is obtained by rounding up no more than a number of the SSBs sent by the a network device within a set period of time up to n^{th} power of 2, wherein n is an integer greater than or equal to 0; and

sending, by the network device, a first SSB and a second SSB to the terminal device so that the terminal device determines that the first SSB and the second SSB are quasi co-located (QCL) in accordance with an identifier of the first SSB, an identifier of the second SSB and the first ~~indication information~~quantity, wherein the identifier of the SSB is determined in accordance with demodulation reference signal (DMRS) sequences of physical broadcast channels (PBCHs), and the identifier of the SSB is used for indicating a transmission position of the SSB within the set period of time.

~~1615.~~ The method according to claim ~~1514~~, wherein the identifier of the first SSB and the identifier of the second SSB are SSB numbers, and

wherein the terminal device determining that the first SSB and the second SSB are quasi co-located (QCL) in accordance with the identifier of the first SSB, the identifier of the second SSB and the first ~~quantity~~indication information comprises:

determining that the first SSB and the second SSB are QCL when a result of the SSB number of the first SSB mod the first quantity is equal to a result of the SSB number of the second SSB mod the first quantity.

~~17. The method according to claim 15 or 16, wherein the first indication information comprises the number of the sent SSBs, and the first quantity is the number of the sent SSBs, or~~

~~wherein the first indication information comprises n, and the first quantity is obtained by rounding up the number of the sent SSBs up to nth power of 2, wherein n is an integer greater than or equal to 0.~~

~~1816.~~ The method according to ~~any one of claims 15-17~~claim 14 or claim 15, wherein the first indication information is indicated by a master information block (MIB), a system information block (SIB) or a radio resource control (RRC) message.

~~19~~17. The method according to claims ~~18~~16, wherein one piece of the first indication information is carried in the SIB message, and the piece of the first indication information is for all cells at a frequency point corresponding to the SIB message.

~~20~~18. The method according to claim ~~19~~17, wherein the terminal device determining that the first SSB and the second SSB are quasi co-located (QCL) in accordance with the identifier of the first SSB, the identifier of the second SSB and the first ~~quantity~~indication ~~information~~ is for all the cells at the frequency point corresponding to the SIB message.

~~21~~19. The method according to claim ~~18~~16, wherein the first indication information is carried in a first indication information list of the SIB message, the first indication information list comprises multiple pieces of first indication information, and each piece of first indication information corresponds to one or more cells.

~~22~~20. The method according to claim ~~21~~19, wherein the terminal device determining that the first SSB and the second SSB are quasi co-located (QCL) in accordance with the identifier of the first SSB, the identifier of the second SSB and the first ~~quantity~~indication ~~information~~ is for all the cells at a frequency point corresponding to the SIB message.

~~23~~21. The method according to claim ~~18~~16, wherein the RRC message comprises an RRC reconfiguration message, and

wherein one piece of the first indication information is carried in the RRC reconfiguration message, and the piece of the first indication information is for all cells at a frequency point corresponding to the RRC reconfiguration message.

~~24~~22. The method according to claim ~~23~~21, wherein the terminal device determining that the first SSB and the second SSB are quasi co-located (QCL) in accordance with the identifier of the first SSB, the identifier of the second SSB and the first ~~quantity~~indication ~~information~~ is for all the cells at the frequency point corresponding to the RRC reconfiguration message.

~~25~~23. The method according to claim ~~18~~16, wherein the RRC message comprises an RRC reconfiguration message, and

wherein the first indication information is carried in a first indication information list of the RRC reconfiguration message, the first indication information list comprises multiple pieces of first indication information, and each piece of first indication information corresponds to one or more cells.

~~26~~24. The method according to claim ~~25~~23, wherein the terminal device determining that the first SSB and the second SSB are quasi co-located (QCL) in accordance with the identifier of the first SSB, the identifier of the second SSB and the first ~~quantity indication information~~ is for all the cells at a frequency point corresponding to the RRC reconfiguration message.

~~27~~25. The method according to ~~any one of claims 15-17~~claim 14 or claim 15, wherein the first SSB and the second SSB are within a same set period of time, or in different set periods of time.

~~28~~26. The method according to ~~any one of claims 15-17~~claim 14 or claim 15, wherein the set period of time is half of a frame period, or 2ms, 4ms, or 8ms.

~~29~~27. A synchronization signal block information processing device, applied in shared spectrum channel access, the device comprising:

a ~~processing module (601)~~processor configured to:

obtain identifiers of multiple SS/PBCH blocks (SSBs), wherein the identifier of SSB is determined in accordance with demodulation reference signal (DMRS) sequences of physical broadcast channels (PBCHs), and the identifier of the SSB is used for indicating a transmission position of the SSB within a set period of time; and

obtain first indication information, wherein the first indication information is used for indicating a first quantity and comprises n, and the first quantity is obtained by rounding up no more than a number of the SSBs sent by a network device within the set period of time up to nth power of 2, wherein n is an integer greater than or equal to 0; and

determine that a first SSB in the multiple SSBs and a second SSB in the multiple SSBs are quasi-co-located (QCL) in accordance with an identifier of the first SSB, an identifier of

the second SSB and the first ~~indication information~~ quantity,

wherein the first indication information comprises n , n being an integer greater than or equal to 0, and the first quantity is obtained by rounding up the number of the sent SSBs up to n^{th} power of 2.

3028. A synchronization signal block information processing device, applied in shared spectrum channel access, the device comprising: ~~a processing module (601) and a sending module (602),~~

~~wherein the processing module is a processor~~ configured to indicate first indication information to a terminal device, wherein the first indication information is used for indicating a first quantity and comprises n , the first quantity is ~~no more than~~ obtained by rounding up a number of the SSBs sent by ~~the a~~ network device within a set period of time up to n^{th} power of 2, wherein n is an integer greater than or equal to 0, and

~~the sending module is a transceiver~~ configured to send a first SSB and a second SSB to the terminal device, so that the terminal device determines that the first SSB and the second SSB are quasi co-located (QCL) in accordance with an identifier of the first SSB, an identifier of the second SSB and the first ~~indication information~~ quantity, wherein the identifier of the SSB is determined in accordance with demodulation reference signal (DMRS) sequences of physical broadcast channels (PBCHs), and the identifier of the SSB is used for indicating a transmission position of the SSB within the set period of time.