

CLAIMS

1. An information receiving method, applied to a terminal, wherein the method comprises:
performing synchronization signal/physical broadcast channel signal block SSB detection;
determining, based on transmission configuration information for first information, a candidate SSB set quasi co-located with a detected first SSB, wherein the first information comprises a SSB; and

performing first processing based on the first SSB and the candidate SSB set, wherein the first processing comprises one of the following:

receiving system information scheduled by a physical control channel associated with the first SSB;

performing radio link monitoring; and

performing radio resource management measurement;

wherein the transmission configuration information comprises at least one of the following:

positions of SSBs and positions of first search spaces for physical control channels associated with the SSBs in a slot;

the number n of search spaces for physical control channels in one slot, wherein n is a positive integer greater than or equal to 1;

a period T of a candidate transmission time window;

a length L of a candidate transmission time window;

a quasi co-location factor q for SSBs in a candidate transmission time window; or

the number and/or positions of SSBs sent in one slot, wherein

the candidate transmission time window is a time window for transmitting the first information;

wherein the determining, based on transmission configuration information for first information, a candidate SSB set quasi co-located with a detected first SSB comprises:

determining a candidate transmission time window set based on the transmission configuration information and an index i of the first SSB; and

determining, in the candidate transmission time window set, a position of the candidate SSB set quasi co-located the first SSB.

2. The method according to claim 1, wherein the transmission configuration information for the first information is carried by the first SSB or prescribed by a protocol.

3. The method according to claim 1, wherein the determining a candidate transmission time window set based on the transmission configuration information and an index i of the first SSB comprises:

calculating, based on the index i of the first SSB, a start position t_0 of a candidate transmission time window corresponding to the first SSB; and

determining the candidate transmission time window set based on the start position of the candidate transmission time window corresponding to the first SSB, a period T of the candidate transmission time window, and a length L of the candidate transmission time window.

4. The method according to claim 1, wherein the determining, in the candidate transmission time window set, a position of the candidate SSB set quasi co-located with the first SSB comprises:

determining an index of the candidate SSB set based on the index i of the first SSB, n , and q ;
and

determining the position of the candidate SSB set in the candidate transmission time window set based on the index of the candidate SSB set.

5. The method according to claim 4, wherein the index i_0 of the candidate SSB set satisfies:
 $[i * n/2] \bmod q = [i_0 * n/2] \bmod q$.

6. The method according to claim 1, wherein the first information further comprises a physical control channel associated with the SSB and system information scheduled by the physical control channel.

7. The method according to claim 6, wherein the receiving system information scheduled by a physical control channel associated with the first SSB comprises:

determining, based on the positions of SSBs and positions of first search spaces for physical control channels associated with the SSBs in a slot, a first search space for the physical control channel associated with the first SSB, and a candidate first search space group for physical control channels associated with the candidate SSB set; and

receiving, based on the first search space and the candidate first search space group, the system information scheduled by the physical control channel associated with the first SSB.

8. The method according to claim 7, wherein the receiving, based on the first search space and the candidate first search space group, the system information scheduled by the physical control channel associated with the first SSB comprises:

performing detection for the candidate first search space group in a candidate transmission time window set, wherein the candidate transmission time window is the time window for transmitting the first information;

determining the first search space for the physical control channel associated with the first SSB and the detected candidate first search space group as search spaces for the physical control channel associated with the first SSB; and

receiving, in a slot in which the search spaces for the physical control channel associated with the first SSB are located, the system information scheduled by the physical control channel associated with the first SSB.

9. The method according to claim 6, wherein the receiving system information scheduled by a physical control channel associated with the first SSB comprises:

a determining step: determining, based on the positions of SSBs and positions of first search spaces for physical control channels associated with the SSBs in a slot, a first search space for the physical control channel associated with the first SSB;

an SSB detection step: performing detection for the candidate SSB set in the candidate transmission time window, wherein the candidate transmission time window is the time window for transmitting the first information; and

a receiving step: determining, based on the positions of SSBs and positions of first search spaces for physical control channels associated with the SSBs in a slot, a candidate first search space group for physical control channels associated with the detected candidate SSB set; determining the first search space for the physical control channel associated with the first SSB and the candidate first search space group for the physical control channels associated with the detected candidate SSB set as search spaces for the physical control channel associated with the first SSB; and receiving, in a slot in which the search spaces for the physical control channel associated with the first SSB are located, the system information scheduled by the physical control channel associated with the first SSB.

10. An information sending method, applied to a network-side device, wherein the method comprises:

performing clear channel detection in a candidate transmission time window, wherein the candidate transmission time window is a time window for transmitting first information; and

sending the first information on a detected clear channel based on transmission configuration information for the first information, wherein the first information comprises synchronization signal/physical broadcast channel signal blocks SSBs, and the SSB carries the transmission configuration information;

wherein the transmission configuration information comprises at least one of the following:

positions of SSBs and positions of first search spaces for physical control channels associated with the SSBs in a slot;

the number n of search spaces for physical control channels in one slot, wherein n is a positive integer greater than or equal to 1;

a period T of a candidate transmission time window;

a length L of a candidate transmission time window;

a quasi co-location factor q for SSBs in a candidate transmission time window; or
the number and/or positions of SSBs sent in one slot, wherein
the candidate transmission time window is a time window for transmitting the first information;

wherein the transmission configuration information causes a terminal to determine a candidate transmission time window set based on an index i of a detected first SSB, and determine, in the candidate transmission time window set, a position of a candidate SSB set quasi co-located with the first SSB.

11. The method according to claim 10, wherein the performing clear channel detection in a candidate transmission time window comprises:

determining a monitoring granularity of clear channel detection based on the number n of search spaces for physical control channels in one slot; and

performing clear channel detection in the candidate transmission time window based on the monitoring granularity.

12. The method according to claim 10 or 11, wherein the number n of search spaces for physical control channels in one slot is determined by a size of system information.

13. The method according to claim 10, wherein the first information further comprises a physical control channel associated with the SSB and system information scheduled by the physical control channel.

14. A terminal, comprising:

a detection module, configured to perform synchronization signal/physical broadcast channel signal block SSB detection;

a determining module, configured to determine, based on transmission configuration information for first information, a candidate SSB set quasi co-located with a detected first SSB, wherein the first information comprises an SSB; and

an execution module, configured to perform first processing based on the first SSB and the candidate SSB set, wherein the first processing comprises one of the following:

receiving system information scheduled by a physical control channel associated with the first SSB;

performing radio link monitoring; and

performing radio resource management measurement;

wherein the transmission configuration information comprises at least one of the following: positions of SSBs and positions of first search spaces for physical control channels associated with the SSBs in a slot;

the number n of search spaces for physical control channels in one slot, wherein n is a positive

integer greater than or equal to 1;

a period T of a candidate transmission time window;

a length L of a candidate transmission time window;

a quasi co-location factor q for SSBs in a candidate transmission time window; or

the number and/or positions of SSBs sent in one slot, wherein

the candidate transmission time window is a time window for transmitting the first information;

the determining module is configured to:

determine a candidate transmission time window set based on the transmission configuration information and an index i of the first SSB; and

determine, in the candidate transmission time window set, a position of the candidate SSB set quasi co-located the first SSB.

15. A network-side device, comprising:

a clear channel detection module, configured to perform clear channel detection in a candidate transmission time window, wherein the candidate transmission time window is a time window for transmitting first information; and

a sending module, configured to send the first information on a detected clear channel based on transmission configuration information for the first information, wherein the first information comprises a synchronization signal/physical broadcast channel signal block SSB, and the SSB carries the transmission configuration information;

wherein the transmission configuration information comprises at least one of the following:
positions of SSBs and positions of first search spaces for physical control channels associated with the SSBs in a slot;

the number n of search spaces for physical control channels in one slot, wherein n is a positive integer greater than or equal to 1;

a period T of a candidate transmission time window;

a length L of a candidate transmission time window;

a quasi co-location factor q for SSBs in a candidate transmission time window; or

the number and/or positions of SSBs sent in one slot, wherein

the candidate transmission time window is a time window for transmitting the first information;

wherein the transmission configuration information causes a terminal to determine a candidate transmission time window set based on an index i of a detected first SSB, and determine, in the candidate transmission time window set, a position of a candidate SSB set quasi co-located with the first SSB.

16. A terminal, comprising a processor, a memory, and a computer program stored in the memory and capable of running on the processor, wherein when the computer program is executed by the processor, the steps of the information receiving method according to any one of claims 1 to 9 are implemented.

17. A network-side device, comprising a processor, a memory, and a computer program stored in the memory and capable of running on the processor, wherein when the computer program is executed by the processor, the steps of the information sending method according to any one of claims 10 to 13 are implemented.