

WHAT IS CLAIMED IS:

1. A method for transmitting a synchronization broadcast transmission, comprising:
determining at least one candidate transmission location corresponding to at least one synchronization signal /physical broadcast channel block (SSB) to be transmitted, wherein a number of the at least one candidate transmission locations is greater than a number of SSBs in one time interval; wherein the number of SSBs in one time interval is pre-configured according to a frequency band;
generating synchronization broadcast transmission comprising the at least one SSB; and transmitting the generated synchronization broadcast transmission at the at least one candidate transmission location in a beam sweeping manner;
wherein the synchronization broadcast transmission further comprises at least one SSB identifier of the at least one SSB;
a maximum value of the at least one SSB identifier corresponds to the number of SSBs in the time interval, or the maximum value of the at least one SSB identifier corresponds to the number of the at least one candidate transmission location; and
the SSB identifier is transmitted through both a demodulation reference signal (DMRS) sequence in a physical broadcast channel (PBCH) in the SSB and data bits in the PBCH.
2. The method of claim 1, wherein the number of the at least one candidate transmission locations is n times the number of SSBs in the time interval, where n is equal to 2, or n is a ratio of a duration of the time interval to a duration of a half frame.
- ~~3. The method of claim 1, wherein the synchronization broadcast transmission further comprises an SSB identifier of the SSB; the SSB identifier is carried in the SSB; and
a maximum value of the SSB identifier corresponds to the number of SSBs in the time interval, or
the maximum value of the SSB identifier corresponds to the number of the candidate transmission locations.~~

~~4. The method of claim 3, wherein the SSB identifier is transmitted through both a demodulation reference signal (DMRS) sequence in a physical broadcast channel (PBCH) in the SSB and data bits in the PBCH.~~

~~53.~~ The method of claim 1, wherein transmitting the generated synchronization broadcast transmission at the at least one candidate transmission location in the beam sweeping manner comprises:

transmitting the generated synchronization broadcast transmission at the at least one candidate transmission location in a selected candidate transmitting slot in the beam sweeping manner,

durations of slots of a candidate set of the candidate transmitting slot being {10ms, 20ms, 40ms, 80ms, 160ms}~~ms~~, or,

the durations of the slots of the candidate set of the candidate transmitting slot being {5ms, 10ms, 20ms, 40ms, 80ms, 160ms}~~ms~~ in response to ~~that~~ the number of SSBs in one time interval ~~is being~~ 4, or the durations of the slots of the candidate set of the candidate transmitting slot being {10ms, 20ms, 40ms, 80ms, 160ms}~~ms~~ in response to ~~that~~ the number of SSBs in one time interval ~~is being~~ greater than 4.

~~64.~~ The method of claim 1, wherein at least two SSBs to be transmitted belong to a group; and

wherein the method further comprises:

detecting whether the at least one candidate transmission location is idle or not, in response to that the at least one candidate transmission location is not idle, determining all SSBs in a group to which the at least one SSB to be transmitted belongs, and

waiving transmission of the generated synchronization broadcast transmission at the at least one candidate transmission locations corresponding to all the SSBs in the group in the beam sweeping manner.

75. A method for transmitting a synchronization broadcast transmission, comprising:
receiving the synchronization broadcast transmission from a base station; and
parsing a synchronization signal /physical broadcast channel block (SSB) according to
the synchronization broadcast transmission, for acquiring an SSB identifier; ~~and~~
wherein parsing the SSB, for acquiring the SSB identifier comprises:
deriving the SSB identifier according to a correspondence relationship between a
number of at least one candidate transmission location and a number of SSBs in one
time interval, wherein one of the at least one candidate transmission location is
corresponding to the SSB, a number of the at least one candidate transmission location is
greater than the number of SSBs in the one time interval, and the number of SSBs in one
time interval is pre-configured according to a frequency band; and
wherein deriving the SSB identifier comprises:
parsing a demodulation reference signal (DMRS) sequence of a physical broadcast
channel (PBCH) in the SSB and data bits in the PBCH according to the synchronization
broadcast transmission; and
acquiring the SSB identifier through both the DMRS sequence of the PBCH in the SSB
and the data bits in the PBCH
~~determining a subframe number corresponding to the acquired SSB identifier according~~
~~to a preset correspondence relationship between SSB identifiers and subframe numbers.~~

86. The method of claim 75, wherein the number of the at least one candidate transmission
location is n times the number of SSBs in the time interval, where n is equal to 2, or n is a
ratio of a duration of the time interval to a duration of a half frame.~~wherein a maximum value~~
~~of the SSB identifier corresponds to a number of candidate transmission locations; and~~
~~wherein the method further comprises:~~
~~converting the acquired SSB identifier according to a correspondence relationship between~~
~~the number of the candidate transmission locations and a number of SSBs in one time interval;~~
~~and~~

determining the subframe number corresponding to the acquired SSB identifier comprises:
determining the subframe number corresponding to the converted SSB identifier.

9. The method of claim 7, wherein parsing the SSB according to the synchronization broadcast transmission, for acquiring the SSB identifier comprises:

parsing a demodulation reference signal (DMRS) sequence of a physical broadcast channel (PBCH) in the SSB and data bits in the PBCH according to the synchronization broadcast transmission; and
acquiring the SSB identifier through both the DMRS sequence of the PBCH in the SSB and the data bits in the PBCH.

10. A device for transmitting a synchronization broadcast transmission, comprising:

a location module, configured to determine a candidate transmission location corresponding to a synchronization signal /physical broadcast channel block (SSB) to be transmitted, wherein a number of candidate transmission locations is greater than a number of SSBs in one time interval;
a generation module, configured to generate synchronization broadcast transmission comprising the SSB; and
a broadcast module, configured to transmit the generated synchronization broadcast transmission at the candidate transmission location in a beam sweeping manner.

11. The device of claim 10, wherein the number of the candidate transmission locations is n times the number of the SSBs in one time interval, n is equal to 2 or n is ratio of a duration of the time interval to a duration of a half frame.

12. The device of claim 10, wherein the synchronization broadcast transmission further comprises an SSB identifier of the SSB; the SSB identifier is carried in the SSB; and
a maximum value of the SSB identifier corresponds to the number of SSBs in the time interval, or

~~the maximum value of the SSB identifier corresponds to the number of the candidate transmission locations.~~

~~13. The device of claim 12, wherein the SSB identifier is transmitted through a demodulation reference signal (DMRS) sequence of a physical broadcast channel (PBCH) in the SSB and data bits in the PBCH.~~

~~14. The device of claim 10, wherein the broadcast module comprises:~~

~~a broadcast submodule, configured to transmit the generated synchronization broadcast transmission at the candidate transmission location in a selected candidate transmitting slot in the beam sweeping manner,~~

~~a candidate set of the candidate transmitting slot being {10, 20, 40, 80, 160}ms,~~

~~or, the candidate set of the candidate transmitting slot being {5, 10, 20, 40, 80, 160}ms in response to the number of SSBs in one time interval is 4 and the candidate set of the candidate transmitting slot being {10, 20, 40, 80, 160}ms in response to that the number of SSBs in one time interval is greater than 4.~~

~~15. The device of claim 10, wherein at least two SSBs to be transmitted belong to a group; and~~

~~wherein the device further comprises:~~

~~a detection module, configured to detect whether the candidate transmission location is idle or not,~~

~~a group module, configured to, in response to that the candidate transmission location is not idle, determine all SSBs in a group to which the SSB to be transmitted belongs; and~~

~~a waiving module, configured to waive transmission of the generated synchronization broadcast transmission at candidate transmission locations corresponding to all the SSBs in the group in the beam sweeping manner.~~

~~16. A device for transmitting a synchronization broadcast transmission, comprising:~~
~~a receiving module, configured to receive synchronization broadcast transmission sent by a base station;~~
~~a parsing module, configured to parse a synchronization signal /physical broadcast channel block (SSB) according to the synchronization broadcast transmission, for acquiring an SSB identifier; and~~
~~a determination module, configured to determine a subframe number corresponding to the acquired SSB identifier according to a preset correspondence relationship between SSB identifiers and subframe numbers.~~

~~17. The device of claim 16, wherein a maximum value of the SSB identifier corresponds to a number of candidate transmission locations; and~~
~~wherein the device further comprises:~~
~~a conversion module, configured to convert the acquired SSB identifier according to a correspondence relationship between the number of the candidate transmission locations and a number of SSBs in one time interval; and~~
~~wherein the determination module comprises:~~
~~a determination submodule, configured to determine a subframe number corresponding to the converted SSB identifier.~~

~~18. The device of claim 16, wherein the parsing module comprises:~~
~~a parsing submodule, configured to parse a demodulation reference signal (DMRS) sequence of a physical broadcast channel (PBCH) in the SSB and data bits in the PBCH according to the synchronization broadcast transmission; and~~
~~an acquisition submodule, configured to acquire the SSB identifier through the DMRS sequence of the PBCH in the SSB and the data bits in the PBCH.~~

~~197.~~ A device for transmitting a synchronization broadcast transmission, comprising:
a processor; and
a memory configured to store an instruction executable by the processor,

wherein the processor is configured to implement the method of any one of claims 1-4;
~~determine a candidate transmission location corresponding to a synchronization signal~~
~~/physical broadcast channel block (SSB) to be transmitted, wherein a number of~~
~~candidate transmission locations is greater than a number of SSBs in one time interval;~~
~~generate synchronization broadcast transmission comprising the SSB; and~~
~~transmit the generated synchronization broadcast transmission at the candidate~~
~~transmission location in a beam sweeping manner.~~

~~208.~~ A device for transmitting a synchronization broadcast transmission, comprising:

a processor; and

a memory configured to store instructions executable by the processor,

wherein the processor is configured to implement the method of claim 5 or 6;

~~receive synchronization broadcast transmission from a base station;~~

~~parse a synchronization signal /physical broadcast channel block (SSB) according to the~~
~~synchronization broadcast transmission, for acquiring an SSB identifier; and~~

~~determine a subframe number corresponding to the acquired SSB identifier according to~~
~~a preset correspondence relationship between SSB identifiers and subframe numbers.~~

~~219.~~ A computer-readable storage medium, in which computer instructions are stored,
wherein the instructions are executed by a processor to implement the method of any one of
claims 1-~~64~~.

~~2210.~~ A computer-readable storage medium, in which computer instructions are stored,
wherein the instructions are executed by a processor to implement the method of claims ~~7-9~~ 5
or 6.