

CLAIMS

1. A method for determining a time domain resource, comprising:

determining, by a terminal device, a first slot set in a first period according to a first time division duplexing, TDD, configuration in radio resource control, RRC, signaling or a second TDD configuration in a physical sidelink broadcast channel, PSBCH; and

selecting, by the terminal device, a part of slots from the first slot set according to a first bitmap, wherein the part of slots forms a time domain resource of a resource pool.

2. The method according to claim 1, further comprising:

determining, by the terminal device, a reserved resource interval based on a number of slots available for sidelink communication in a statistical period.

3. The method according to claim 2, wherein determining, by the terminal device, the reserved resource interval based on the number of slots available for sidelink communication in the statistical period comprises:

determining, by the terminal device, the reserved resource interval in the following mode:

$$P'_{\text{rsvp_TX}} = \left\lceil P_{\text{rsvp_TX}} * \frac{P_{\text{step}}}{T} \right\rceil;$$

where $P'_{\text{rsvp_TX}}$ represents the resource reservation interval in slots, $P_{\text{rsvp_TX}}$ represents an absolute resource reservation period in milliseconds, T represents the statistical period, and P_{step} represents the number of slots available for sidelink communication in the statistical period.

4. The method according to any one of claims 1-3, when the terminal device is a terminal device in coverage of a base station, the method further comprises:

determining, by the terminal device, the second TDD configuration in the PSBCH according to the first TDD configuration in the RRC signaling; and

transmitting, by the terminal device, the PSBCH, wherein the PSBCH carries the second TDD configuration.

5. The method according to claim 4, wherein the second TDD configuration comprises at least

one of the following:

first indication information used to indicate a number of patterns;

second indication information used to indicate a pattern period; and

third indication information used to indicate a number of full uplink slots in the first pattern and/or the second pattern.

6. The method according to claim 5, wherein

the third indication information indicates the number of full uplink slots in the first pattern and/or the second pattern through N bits $\{b_5, \dots, b_{5+N-1}\}$;

wherein N represents a total number of bits used for indicating the number of full uplink slots in each pattern.

7. The method according to claim 6, when a number of the patterns indicated by the first TDD configuration in the RRC signaling is 2, the method comprises:

determining, by the terminal device, a decimal representation value of the N bits in the PSBCH in the following mode:

$$D = [a \times 2^{\mu_{\text{ref}} - \mu_{\text{PSBCH}}}] \times (P_2 \times 2^{\mu_{\text{ref}}} + 1) + [b \times 2^{\mu_{\text{ref}} - \mu_{\text{PSBCH}}}]$$

where D represents the decimal representation value of the N bits in the PSBCH, a represents the number of full uplink slots in the first pattern, b represents the number of full uplink slots in the second pattern, μ_{ref} represents a reference SCS index, and μ_{PSBCH} represents a configured or pre-configured SCS index on a BWP where the PSBCH is located.

8. The method according to claim 7, wherein μ_{ref} is determined in the following mode:

when a sum of the period of the first pattern and the period of the second pattern is less than 4ms or not greater than 2.5ms, $\mu_{\text{ref}} = \mu_{\text{PSBCH}}$; or,

when the sum of the period of the first pattern and the period of the second pattern is 4ms or 5ms, $\mu_{\text{ref}} = \min(\mu_{\text{PSBCH}}, 2)$; or,

when the sum of the period of the first pattern and the period of the second pattern is 10ms, $\mu_{\text{ref}} = \min(\mu_{\text{PSBCH}}, 1)$; or,

when the sum of the period of the first pattern and the period of the second pattern is 20ms, $\mu_{\text{ref}} = 0$.

9. An apparatus for determining a time domain resource, applied to a terminal device, the

apparatus comprising:

a determination unit, configured to determine a first slot set in a first period according to a first time division duplexing, TDD, configuration in radio resource control, RRC, signaling or a second TDD configuration in a physical sidelink broadcast channel, PSBCH; and

a selection unit, configured to select a part of slots from the first slot set according to a first bitmap, wherein the part of slots forms a time domain resource of a resource pool.

10. The apparatus according to claim 9, wherein

the determination unit is further configured to determine a reserved resource interval based on the number of slots available for sidelink communication in a statistical period.

11. The apparatus according to claim 10, wherein the determination unit is configured to determine the reserved resource interval in the following mode:

$$P'_{\text{rsvp_TX}} = \left\lfloor P_{\text{rsvp_TX}} * \frac{P_{\text{step}}}{T} \right\rfloor;$$

where $P'_{\text{rsvp_TX}}$ represents the resource reservation interval in slots, $P_{\text{rsvp_TX}}$ represents an absolute resource reservation period in milliseconds, T represents the statistical period, and P_{step} represents the number of slots available for sidelink communication in the statistical period.

12. The apparatus according to any one of claims 9-11, wherein when the terminal device is a terminal device in coverage of a base station,

the determination unit is further configured to determine the second TDD configuration in the PSBCH according to the first TDD configuration in the RRC signaling; and

the apparatus further comprises a transmission unit configured to transmit the PSBCH, wherein the PSBCH carries the second TDD configuration.

13. The apparatus according to claim 12, wherein the second TDD configuration comprises at least one of the following:

first indication information used to indicate a number of patterns;

second indication information used to indicate a pattern period; and

third indication information used to indicate a number of full uplink slots in the first pattern and/or the second pattern.

14. The apparatus according to claim 13, wherein

the third indication information indicates the number of full uplink slots in the first pattern and/or the second pattern through N bits $\{b_5, \dots, b_{5+N-1}\}$;

wherein N represents a total number of bits used for indicating the number of full uplink slots in each pattern;

15. The apparatus according to claim 14, wherein when a number of the patterns indicated by the first TDD configuration in the RRC signaling is 2, the determination unit is further configured to determine a decimal representation value of the N bits in the PSBCH in the following mode:

$$D = \lfloor a \times 2^{\mu_{\text{ref}} - \mu_{\text{PSBCH}}} \rfloor \times (P_2 \times 2^{\mu_{\text{ref}}} + 1) + \lfloor b \times 2^{\mu_{\text{ref}} - \mu_{\text{PSBCH}}} \rfloor;$$

where D represents the decimal representation value of the N bits in the PSBCH, a represents the number of full uplink slots in the first pattern, b represents the number of full uplink slots in the second pattern, μ_{ref} represents a reference SCS index, and μ_{PSBCH} represents a configured or pre-configured SCS index on a BWP where the PSBCH is located.

16. The apparatus according to claim 15, wherein μ_{ref} is determined in the following mode:

when a sum of the period of the first pattern and the period of the second pattern is less than 4ms or not greater than 2.5ms, $\mu_{\text{ref}} = \mu_{\text{PSBCH}}$; or,

when the sum of the period of the first pattern and the period of the second pattern is 4ms or 5ms, $\mu_{\text{ref}} = \min(\mu_{\text{PSBCH}}, 2)$; or,

when the sum of the period of the first pattern and the period of the second pattern is 10ms, $\mu_{\text{ref}} = \min(\mu_{\text{PSBCH}}, 1)$; or,

when the sum of the period of the first pattern and the period of the second pattern is 20ms, $\mu_{\text{ref}} = 0$.

17. A terminal device, comprising: a processor and a memory, wherein the memory is configured to store a computer program, and the processor is configured to call and run the computer program stored in the memory to execute the method according to any one of claims 1-8.

18. A chip, comprising: a processor, configured to call and run a computer program from a memory, to enable a device provided with the chip to execute the method according to any one of claims 1-8.

19. A computer readable storage medium, configured to store a computer program, wherein the computer program enables a computer to execute the method according to any one of claims 1-8.

20. A computer program product, comprising a computer program instruction, wherein the computer program instruction enables a computer to execute the method according to any one of claims 1-8.