CLAIMS

1. A resource selection method based on partial sensing, performed by a User Equipment (UE), the method comprising:

determining at least one selection slot and at least one sensing slot, wherein the at least one selection slot is after a target moment, and the at least one sensing slot is before the target moment; and

determining a candidate resource set from available resources in the at least one selection slot based on a sensing result in the at least one sensing slot, and selecting a transmission resource from the candidate resource set.

2. The method of claim 1, wherein determining the at least one selection slot and the at least one sensing slot comprises:

determining the at least one selection slot from a resource selection window; and

for any one of the at least one selection slot, determining a target candidate slot corresponding to the selection slot as one of the at least one sensing slot, wherein the target candidate slot is before the target moment, an interval between the target candidate slot and the selection slot is an integer multiple of a resource reservation period, and the target moment is determined based on the target moment.

3. The method of claim 2, wherein the interval between the target candidate slot and the selection slot is i times the resource reservation period, and i is a smallest positive integer to make the target candidate slot to be before the target moment.

4. The method of claim 1, wherein determining the at least one selection slot and the at least

one sensing slot comprises:

determining the at least one selection slot from a resource selection window; and

determining, based on the at least one selection slot and a resource reservation period, the at least one sensing slot,

wherein position of the target moment is after a last one of the at least one sensing slot and before a first one of the at least one selection slot.

5. The method of any one of claims 1 to 4, wherein the target moment is a first one of the at least one selection slot minus a third offset, and the third offset is determined based on a subcarrier interval.

6. The method of claim 4, further comprising:

continuing sensing in the determined at least one sensing slot between a second moment and a third moment,

wherein the second moment is any one of: a moment to trigger a resource selection, a moment to trigger a resource reselection, or a moment when a high layer triggers a physical layer to report the candidate resource set; and

the third moment is a moment when the physical layer reports the candidate resource set to the higher layer.

7. The method of any one of claims 1 to 6, wherein a number of the at least one selection slot is greater than or equal to a number threshold, wherein the number threshold is configured by a network device, or pre-configured.

8. The method of any one of claims 1 to 7, wherein determining the candidate resource set from the available resources in the at least one selection slot based on the sensing result in the at least one sensing slot, and selecting the transmission resource from the candidate resource set comprises:

for any available resource in the at least one selection slot, measuring a channel quality of a Physical Sidelink Control Channel (PSCCH) or a Physical Sidelink Shared Channel (PSSCH) scheduled by the PSCCH in response to sensing first sidelink control information transmitted by the PSCCH in a target sensing slot;

determining Q slots according to the target sensing slot and a resource reservation period carried in the first sidelink control information in response to the measured channel quality being greater than a channel quality threshold and a resource pool used by the UE activating a resource reservation between transmission blocks (TBs), wherein Q is a positive integer;

excluding the available resource from the at least one selection slot in response to that a time-frequency resource indicated by a time-frequency resource indication domain in the first sidelink control information received in the target sensing slot and in Q pieces of the first sidelink control information assumed to be received in the Q slots overlaps with the available resource or periodic resources corresponding to the available resource; and

obtaining the candidate resource set based on an exclusion result of the available resource in the at least one selection slot, and selecting the transmission resource from the candidate resource set.

9. The method of claim 8, wherein Q=1, or

wherein $Q=\lceil Tscal/Prx \rceil$, $\lceil\ \rceil$ represents rounding up, Prx represents the resource reservation period carried in the first sidelink control information, and Tscal is a value in millisecond converted from a difference between a last one of the at least one selection slot and a third moment, the third moment being a first one of the at least one selection slot minus $T_{proc,1}$.

10. The method of claim 9, wherein in response to that a first condition is met, Q=⌈Tscal/Prx⌉,

wherein the first condition comprises at least one of followings:

a fourth moment determined based on the target sensing slot being after the last one of the at least one sensing slot determined by the UE, wherein the fourth moment is equal to a sum of the target sensing slot and Prxlg, wherein Prxlg is a number of logical slots converted from the Prx, or

Prx being less than Tscal.

11. A resource selection device based on partial sensing, comprising:

a slot determining module, configured to determine at least one selection slot and at least one sensing slot, wherein the at least one selection slot is after a target moment and the at least one sensing slot is before the target moment; and

a resource selecting module, configured to determine a candidate resource set from available resources in the at least one selection slot based on a sensing result in the at least one sensing slot, and select a transmission resource from the candidate resource set.

12. The device of claim 11, wherein the slot determining module is further configured to:

determine the at least one selection slot from a resource selection window; and

for any one of the at least one selection slot, determine a target candidate slot corresponding to the selection slot as one of the at least one sensing slot, wherein the target candidate slot is before the target moment, an interval between the target candidate slot and the selection slot is an integer multiple of a resource reservation period, and the target moment is determined based on the target moment.

13. The device of claim 12, wherein the interval between the target candidate slot and the selection slot is i times the resource reservation period, and i is a smallest positive integer to make the target candidate slot to be before the target moment.

14. The device of claim 11, wherein the slot determining module is further configured to:

determine the at least one selection slot from a resource selection window; and

determine, based on the at least one selection slot and a resource reservation period, the at least one sensing slot,

wherein position of the target moment is after a last one of the at least one sensing slot and before a first one of the at least one selection slot.

15. The device of any one of claims 11 to 14, wherein the target moment is a first one of the at least one selection slot minus a third offset, and the third offset is determined based on a subcarrier interval.

16. The device of claim 14, further comprising:

an information sensing module, configured to continue sensing in the determined at least one sensing slot between a second moment and a third moment,

wherein the second moment is any one of: a moment to trigger a resource selection, a moment to trigger a resource reselection, or a moment when a high layer triggers a physical layer to report the candidate resource set; and

the third moment is a moment when the physical layer reports the candidate resource set to the higher layer.

17. The device of any one of claims 11 to 16, wherein a number of the at least one selection slot is greater than or equal to a number threshold, wherein the number threshold is configured by a network device, or pre-configured.

18. The device of any one of claims 11 to 17, wherein the resource selecting module is further configured to:

for any available resource in the at least one selection slot, measure a channel quality of a Physical Sidelink Control Channel (PSCCH) or a Physical Sidelink Shared Channel (PSSCH) scheduled by the PSCCH in response to sensing first sidelink control information transmitted by the PSCCH in a target sensing slot;

determine Q slots according to the target sensing slot and a resource reservation period carried in the first sidelink control information in response to the measured channel quality being greater than a channel quality threshold and a resource pool used by the UE activating a resource reservation between transmission blocks (TBs), wherein Q is a positive integer;

exclude the available resource from the at least one selection slot in response to that a time-frequency resource indicated by a time-frequency resource indication domain in the first sidelink control information received in the target sensing slot and in Q pieces of the first sidelink control information assumed to be received in the Q slots overlaps with the available resource or periodic resources corresponding to the available resource; and

obtain the candidate resource set based on an exclusion result of the available resource in the at least one selection slot, and select the transmission resource from the candidate resource set.

19. The device of claim 18, wherein Q=1, or

wherein $Q=\lceil Tscal/Prx \rceil$, $\lceil\ \rceil$ represents rounding up, Prx represents the resource

reservation period carried in the first sidelink control information, and Tscal is a value in millisecond converted from a difference between a last one of the at least one selection slot and a third moment, the third moment being a first one of the at least one selection slot minus $T_{proc,1}$.

20. The device of claim 19, wherein in response to that a first condition is met, $Q=\lceil Tscal/Prx \rceil$,

wherein the first condition comprises at least one of followings:

a fourth moment determined based on the target sensing slot being after the last one of the at least one sensing slot determined by the UE, wherein the fourth moment is equal to a sum of the target sensing slot and Prxlg, wherein Prxlg is a number of logical slots converted from the Prx, or

Prx being less than Tscal.