CLAIMS

What is claimed is:

1. A search space monitoring method, wherein the method is executed by a terminal device, a plurality of transmission objects are configured for the terminal device, and the method comprises:

obtaining scheduling configuration information; and

monitoring a search space SS based on the scheduling configuration information, wherein the SS comprises an SS in which at least two transmission objects schedule one transmission object; wherein each transmission object comprises a cell or a transmission and reception point, TRP;

wherein a processing capability threshold X_i is assigned to the i-th transmission object A_i in the at least two transmission objects, and X_i does not exceed a maximum processing capability for a single transmission object; and

within a second specific time, a processing capability for an SS in which the A_i schedules one transmission object does not exceed X_i .

2. The method according to claim 1, wherein the plurality of transmission objects comprise at least a first transmission object and a second transmission object, and the SS being monitored comprises at least one of the following:

a first SS in which the first transmission object is self-scheduled;

a second SS in which the second transmission object schedules the first transmission object; and

a third SS in which the second transmission object is self-scheduled.

3. The method according to claim 2, wherein at least one of the following is satisfied within a first specific time:

a processing capability for monitoring the first SS does not exceed a maximum processing capability for a single transmission object;

a total processing capability for monitoring the second SS and the third SS does not exceed a maximum processing capability for a single transmission object; and

a total processing capability for monitoring the second SS and the third SS does not exceed L multiplied by a maximum processing capability for a single transmission object, wherein L is a positive number.

4. The method according to claim 3, wherein L is less than or equal to the number of transmission objects scheduled by the second transmission object.

5. The method according to claim 3, wherein

L is predefined; or

L is related to a maximum processing capability M reported by the terminal device.

6. The method according to claim 1, wherein at least two of the X_i satisfy the following relationship:

$\sum_{1}^{N} X_i = R$; wherein

N is a quantity of the at least two transmission objects, and N is greater than or equal to 2; and

R is a maximum processing capability determined based on at least one of parameters of the at least two transmission objects; or

R is a maximum processing capability determined based on a parameter of the one transmission object that is scheduled; or

R is a maximum processing capability reported by the terminal device.

7. The method according to claim 1, wherein at least two of the X_i satisfy the following relationship:

$\sum_{1}^{N} \frac{X_i}{P_i} = 1$; wherein

N is a quantity of the at least two transmission objects, and N is greater than or equal to 2; and

P_i is a maximum processing capability determined based on a parameter of the A_i.

8. The method according to claim 1, wherein

a processing capability G_i is assigned to the i-th transmission object A_i in the at least two transmission objects, and G_i does not exceed a maximum processing capability for a single transmission object; and

within a third specific time, a processing capability for an SS in which the A_i schedules one transmission object is G_i.

9. The method according to claim 8, wherein at least two of the G_i satisfy the following relationship:

$\sum_{1}^{N} G_i \leq S$; wherein

N is a quantity of the at least two transmission objects, and N is greater than or equal to 2; and

S is a maximum processing capability determined based on at least one of parameters of the at least two transmission objects; or

S is a maximum processing capability determined based on a parameter of the one transmission object that is scheduled.

10. The method according to claim 1, 3, or 8, wherein at least one of the first specific time, the second specific time, and the third specific time comprises one of the following:

a specific time point;

at least one slot;

one time interval;

within a valid time of a monitoring timer; and

a physical downlink control channel PDCCH monitoring opportunity, wherein earliest starting positions of schedulable physical downlink shared channels

PDSCHs or physical uplink shared channels PUSCHs corresponding to the PDCCH monitoring opportunity are the same.

11. The method according to claim 1, wherein the scheduling configuration information is used to configure at least one of the following:

configuration of the plurality of transmission objects, an SS to be monitored, and a DCI format for scheduling.

12. The method according to claim 1, wherein before the obtaining scheduling configuration information, the method further comprises: sending a terminal capability, wherein the terminal capability comprises at least one of the following:

whether monitoring on scheduling of one transmission object by at least two transmission objects is supported;

a maximum processing capability for monitoring at least two transmission objects;

an earliest starting position of a schedulable PDSCH or PUSCH;

a length of a specific time interval; and

a length of a monitoring timer.

13. A search space monitoring method, wherein the method is executed by a network device, and the method comprises:

sending scheduling configuration information; wherein

the scheduling configuration information is used for monitoring an SS by a terminal device, a plurality of transmission objects are configured for the terminal device, and the SS comprises an SS in which at least two transmission objects schedule one transmission object; wherein each transmission object comprises a cell or a transmission and reception point, TRP;

wherein a processing capability threshold X_i is assigned to the i-th transmission object A_i in the at least two transmission objects, and X_i does not exceed a maximum processing capability for a single transmission object; and

within a second specific time, a processing capability for an SS in which the A_j schedules one transmission object does not exceed X_i .

14. The method according to claim 13, wherein the plurality of transmission objects comprise at least a first transmission object and a second transmission object, and the SS being monitored comprises at least one of the following:

a first SS in which the first transmission object is self-scheduled;

a second SS in which the second transmission object schedules the first transmission object; and

a third SS in which the second transmission object is self-scheduled.

15. The method according to claim 13, wherein before the sending scheduling configuration information, the method further comprises: receiving a terminal capability, wherein the terminal capability comprises at least one of the following:

whether monitoring on scheduling of one transmission object by at least two transmission objects is supported;

a maximum processing capability for monitoring at least two transmission objects;

an earliest starting position of a schedulable PDSCH or PUSCH;

a length of a specific time interval; and

a length of a monitoring timer.

16. A terminal device, wherein a plurality of transmission objects are configured for the terminal device, and the terminal device comprises:

an obtaining module, configured to obtain scheduling configuration information; and

a monitoring module, configured to monitor an SS based on the scheduling configuration information, wherein the SS comprises an SS in which at least two transmission objects schedule one transmission object; wherein each transmission object comprises a cell or a transmission and reception point, TRP;

wherein a processing capability threshold X_i is assigned to the i-th transmission object A_i in the at least two transmission objects, and X_i does not exceed a maximum processing capability for a single transmission object; and

within a second specific time, a processing capability for an SS in which the A_i schedules one transmission object does not exceed X_i.

17. A network device, comprising:

a sending module, configured to send scheduling configuration information; wherein

the scheduling configuration information is used for monitoring an SS by a terminal device, a plurality of transmission objects are configured for the terminal device, and the SS comprises an SS in which at least two transmission objects schedule one transmission object; wherein each transmission object comprises a cell or a transmission and reception point, TRP;

wherein a processing capability threshold X_i is assigned to the i-th transmission object A_i in the at least two transmission objects, and X_i does not exceed a maximum processing capability for a single transmission object; and

within a second specific time, a processing capability for an SS in which the A_i schedules one transmission object does not exceed X_i.

18. A terminal device, comprising a memory, a processor, 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 search space monitoring method according to any one of claims 1 to 12 are implemented.

19. A network device, comprising a memory, a processor, 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 search space monitoring method according to any one of claims 13 to 15 are implemented.