

CLAIMS

What is claimed is:

1. An active/inactive state detection method, wherein the method is performed by a monitoring and detecting system, and comprises:

5 monitoring a distance between an object and a target object within a distance detection range;

 when the distance between the object and the target object satisfies a first predetermined condition, sending a first instruction to an image acquisition system corresponding to the distance detection range, so as to activate the image acquisition
10 system to obtain an image in an image acquisition area of the image acquisition system;

 determining a state of the target object based on a recognition result obtained by performing object recognition on the image in the image acquisition area, wherein the state of the target object comprises an active state and/or an inactive state; and

 after determining the state of the target object and when the distance between the
15 object and the target object satisfies a second predetermined condition, sending a second instruction to the image acquisition system corresponding to the distance detection range, so as to shut down the image acquisition system or switch the image acquisition system to a standby mode, wherein the second predetermined condition comprises:

20 a difference in distances between the object and the target object at a second predetermined time interval is less than a predetermined threshold.

2. The method according to claim 1, wherein the first predetermined condition comprises at least one of the following:

 the distance between the object and the target object is less than a first
25 predetermined threshold;

 a statistical value of the distance between the object and the target object within a first predetermined time period is less than a second predetermined threshold;

 a difference in distances between the object and the target object at a first predetermined time interval is greater than a third predetermined threshold;

30 the distance between the object and the target object is greater than a fourth predetermined threshold; or

 a statistical value of the distance between the object and the target object within a second predetermined time period is greater than a fifth predetermined threshold.

3. The method according to claim 1, wherein before the determining a state of the target object based on a recognition result obtained by performing object recognition on the image in the image acquisition area, the method further comprises:

5 sending the image in the image acquisition area to an object recognition system, so that the object recognition system performs object recognition on the image in the image acquisition area to obtain the recognition result; and receiving the recognition result returned by the object recognition system.

4. The method according to claim 3, wherein the object recognition system is a cloud object recognition system.

10 5. The method according to claim 3, wherein the recognition result comprises at least one of the following:

a judgment conclusion indicating whether the image in the image acquisition area comprises a predetermined object; or

15 a quantity of predetermined objects comprised in the image in the image acquisition area.

6. The method according to claim 5, wherein the determining a state of the target object based on a recognition result obtained by performing object recognition on the image in the image acquisition area comprises at least one of the following:

20 when the image in the image acquisition area comprises the predetermined object, determining that the state of the target object is the active state;

when the image in the image acquisition area does not comprise the predetermined object, determining that the state of the target object is the inactive state;

25 when the quantity of the predetermined objects comprised in the image in the image acquisition area is greater than zero, determining that the state of the target object is the active state; or

when the quantity of the predetermined objects comprised in the image in the image acquisition area is zero, determining that the state of the target object is the inactive state.

30 7. The method according to any one of claims 1 to 6, wherein after the determining a state of the target object, the method further comprises:

sending the state of the target object to a service system, so that the service system determines a service process corresponding to the state of the target object.

8. The method according to any one of claims 1 to 6, wherein after the determining a state of the target object, the method further comprises:

recording the state of the target object; and
determining the first predetermined condition based on the state of the target object.

9. An electronic device, comprising:

a processor; and

5 a memory, configured to store a computer executable instruction, wherein when executed, the computer executable instruction enables the processor to perform a method according to any one of the preceding claims.

10. A computer readable storage medium, wherein the computer readable storage medium stores one or more programs, and when the one or more programs are executed

10 by an electronic device that comprises multiple applications, the electronic device is enabled to perform a method according to any one of the claims 1 to 8.