What is claimed is:

1. A method for stripping a target object from a three-dimensional CT image, comprising:

obtaining point cloud data based on CT data（S210）, wherein the CT data is obtained by performing computed tomography on N objects to be inspected through a security inspection device, where N is greater than or equal to 2;

determining a target object area in the N objects to be inspected according to the point cloud data（S220）; and

stripping the target object area from the three-dimensional CT image（S230）, wherein the three-dimensional CT image is generated according to the CT data.

2.The method according to claim 1, wherein after stripping the target object area, the method further comprises:

displaying at least one image of the three-dimensional CT image before stripping, the three-dimensional CT image after stripping or the three-dimensional CT image of the target object on a security inspection image discrimination interface.

3.The method according to claim 2, wherein the determining a target object area in the N objects to be inspected according to the point cloud data comprises:

determining a local contour and size of the target object according to a first prior rule and the point cloud data（S410）, wherein the target object has a fixed shape in a use state or a non-use state, and the first prior rule is obtained according to the fixed shape of the target object; and

determining the target object area based on the point cloud data according to the local contour and the size of the target object（S420）.

4.The method according to claim 3, wherein the local contour of the target object comprises a first surface, and the determining a local contour and size of the target object comprises:

determining the first surface according to the first prior rule and the point cloud data, wherein the first prior rule comprises a shape rule of the first surface; and

determining the size of the target object in an axial direction of the first surface.

5.The method according to claim 4, wherein before obtaining the point cloud data based on the CT data, the method further comprises:

obtaining a direct volume rendering result, a first hit position and a normal vector of the first hit position through a multiple render targets technology based on the CT data,

wherein the first hit position and the normal vector of the first hit position are used to obtain the point cloud data, and the direct volume rendering result is used to obtain the local contour and the size of the target object.

6.The method according to claim 5, wherein the determining a local contour and size of the target object according to the first prior rule and the point cloud data comprises:

over-segmenting the point cloud data by a super voxel clustering algorithm to obtain point cloud cluster data（S910）; and

determining the local contour and the size of the target object

from the point cloud cluster data according to the first prior rule（S920）.

7.The method according to any of claims 4 to 6, wherein the N objects to be inspected comprise a suitcase and N-1 objects to be inspected in the suitcase, and the target object comprises a portable electronic device;

optionally, wherein the determining the first surface according to a first prior rule and the point cloud data comprises:

determining M candidate surfaces of the portable electronic device based on the point cloud data（S1110）, where M is greater than or equal to 1; and

determining the first surface from the M candidate surfaces according to the first prior rule（S1120）;

optionally, wherein the determining the first surface from the M candidate surfaces according to the first prior rule comprises:

determining a largest candidate surface from the M candidate surfaces, and m candidate surfaces whose point cloud counts fall within a predetermined range relative to the largest candidate surface, wherein m is greater than or equal to 0, and less than or equal to M-1; and

voting on the largest candidate surface and the m candidate surfaces to determine the first surface according to the first prior rule.

8.The method according to claim 7, wherein the determining a size of the target object in an axial direction of the first surface comprises:

performing direction correction and/or range correction on the

first surface to obtain a second surface（S1210）; and

determining the size of the target object in an axial direction of the second surface（S1220）;

optionally, wherein the size of the target object comprises a thickness of the portable electronic device, and the determining a size of the target object in an axial direction of the second surface comprises:

determining a third surface and a fourth surface according to the second surface, wherein the third surface and the fourth surface intersect with each other and are perpendicular to the second surface respectively; and

determining the thickness according to the third surface and the fourth surface;

optionally, wherein the determining the thickness according to the third surface and the fourth surface comprises:

splicing the third surface and the fourth surface along a first direction to obtain a fifth surface, wherein the first direction is parallel to the second surface;

obtaining a histogram based on the projection of the fifth surface in the first direction; and

determining the thickness according to the histogram within a predetermined range.

9.The method according to claim 7, wherein before determining M candidate surfaces of the portable electronic device based on the point cloud data, the method further comprises:

determining a pull rod area and/or a frame area of the suitcase according to a second prior rule and the point cloud data（S710）,

wherein the second prior rule is obtained according to a fixed shape of the suitcase;

removing the pull rod area and/or the frame area from the point cloud data（S720）.

10.The method according to claim 9, wherein the determining a pull rod area and/or a frame area of the suitcase comprises:

obtaining a first projection image of the point cloud data perpendicular to a first coordinate axis, wherein the first coordinate axis is parallel to a pull rod direction of the suitcase; and

determining the pull rod area from a horizontal projection of the first projection image, and/or determining the frame area from a vertical projection of the first projection image according to the second prior rule;

optionally, wherein the determining a pull rod area of the suitcase comprises:

searching a histogram generated by the horizontal projection to determine S first wave peak positions, where S is greater than or equal to 1;

determining a target wave peak position from the S first wave peak positions according to the second prior rule, wherein the second prior rule comprises the prior position information of the pull rod area in the suitcase; and

searching a first wave trough position corresponding to the target wave peak position as an initial position of the pull rod area;

optionally, wherein the determining a frame area of the

suitcase comprises:

searching a histogram generated by the vertical projection to determine two second wave peak positions at a left end and a right end;

searching second wave trough positions corresponding to the respective second wave peak positions at the left end and the right end as initial positions of the frame area at the left end and the right end;

optionally, wherein the determining a pull rod area of the suitcase further comprises:

projecting point cloud data of the pull rod area perpendicular to a second coordinate axis to obtain a second projection image, wherein the second coordinate axis is perpendicular to a pull rod direction of the suitcase, and the projections of at least two pull rods of the suitcase in the second projection image are parallel to each other; and

determining the pull rod area from a vertical projection of the second projection image according to the second prior rule.

11. The method according to claim 7, wherein if a plurality of first surfaces is determined from the M candidate surfaces, the method further comprises:

determining a size of the target object in an axial direction of each of the first surfaces; and/or

determining a target object area corresponding to each of the first surfaces.

12. The method according to claim 1, wherein if a plurality of target object areas is determined according to the point cloud

data, and the types of each target object are the same or different, the stripping the target object area from the three-dimensional CT image comprises:

stripping a plurality of target object areas from the three-dimensional CT image sequentially.

13. An apparatus for stripping a target object from a three-dimensional CT image, comprising:

a point cloud data module（1510） configured to obtain point cloud data based on CT data, wherein the CT data is obtained by performing computed tomography on N objects to be inspected by a security inspection device, and N is greater than or equal to 2;

an area determining module（1520） configured to determine a target object area in the N objects to be inspected according to the point cloud data;

a target stripping module（1530） configured to strip the target object area from the three-dimensional CT image, wherein the three-dimensional CT image is generated according to the CT data.

14. A security inspection CT system, comprising:

a CT scanning device configured to obtain CT data by performing computed tomography on N objects to be inspected, where N is greater than or equal to 2;

an electronic device（1600）, comprising:

a memory（1602，1603） for storing the CT data from the CT scanning device and/or one or more programs;

one or more processors（1601）;

wherein the one or more programs, when executed by the one or more processors, cause the one or more processors to perform the

method according to any of claims 1 to 12.

15. A computer-readable storage medium, storing executable instructions that, when executed by a processor, cause the processor to perform the method according to any of claims 1 to 12.