CLAIMS

1. An image data generation method, comprising:

acquiring a plurality of virtual three-dimensional prop models respectively corresponding to a plurality of kinds of table game props, the table game prop being a game tool used in a table game scene;

in a virtual three-dimensional table game scene, randomly determining at least one virtual three-dimensional prop model comprising at least one kind of table game prop from the plurality of virtual three-dimensional prop models;

overlaying the at least one virtual three-dimensional prop model to the virtual three-dimensional table game scene to form a virtual target game scene; and

performing planar projection processing on the virtual target game scene to obtain two-dimensional image data comprising the at least one kind of table game prop,

wherein the method further comprises:

acquiring a real table game scene image;

performing style processing on the real table game scene image and the two-dimensional image data to obtain a real table game scene feature map and a two-dimensional image feature map respectively;

performing style transfer on the two-dimensional image feature map using the real table game scene feature map to obtain a two-dimensional image transferred feature map; and

performing back propagation based on the two-dimensional image transferred feature map to determine transferred image data after style transfer.

2. The method of claim 1, wherein acquiring the plurality of virtual three-dimensional prop

models respectively corresponding to the plurality of kinds of table game props comprises:

performing image collection on each kind of table game prop in the plurality of kinds of table game props based on a plurality of shooting views to obtain a view image sequence of the each kind of table game prop; and

performing three-dimensional model construction on the each kind of table game prop based on the view image sequence to obtain at least one virtual three-dimensional prop model corresponding to each kind of table game prop.

3. The method of claim 2, wherein performing the three-dimensional model construction on the each kind of table game prop based on the view image sequence to obtain the at least one virtual three-dimensional prop model corresponding to the each kind of table game prop comprises:

determining three-dimensional point cloud data corresponding to at least one table game prop in the each kind of table game prop based on the view image sequence; and

performing rendering processing on the three-dimensional point cloud data corresponding to the at least one table game prop to obtain a virtual three-dimensional prop model corresponding to the at least one table game prop.

4. The method of claim 3, wherein performing the rendering processing on the three-dimensional point cloud data corresponding to the at least one table game prop comprises at least one of:

performing surface smoothing processing on the three-dimensional point cloud data, the surface smoothing processing being configured to perform filtering processing on a point cloud of a surface of the three-dimensional point cloud data to obtain a surface contour of the corresponding virtual three-dimensional prop model;

performing texture smoothing processing on the three-dimensional point cloud data,

the texture smoothing processing being configured to perform filtering processing on a texture of a surface image of the corresponding virtual three-dimensional prop model; or

performing symmetry processing on the three-dimensional point cloud data, the symmetry processing being configured to regulate a contour shape of the three-dimensional point cloud data.

5. The method of any one of claims 1 to 4, wherein overlaying the at least one virtual three-dimensional prop model to the virtual three-dimensional table game scene to form the virtual target game scene comprises:

performing overlaying by taking the at least one virtual three-dimensional prop model as foreground information and the virtual three-dimensional table game scene as background information to obtain the virtual target game scene.

6. The method of any one of claims 1 to 4, wherein overlaying the at least one virtual three-dimensional prop model to the virtual three-dimensional table game scene to form the virtual target game scene comprises:

determining display information of each virtual three-dimensional prop model in the at least one virtual three-dimensional prop model; and

overlaying the at least one virtual three-dimensional prop model to the virtual three-dimensional table game scene based on the display information of the at least one virtual three-dimensional prop model to form the virtual target game scene.

7. The method of claim 6, wherein determining the display information of each virtual three-dimensional prop model in the at least one virtual three-dimensional prop model comprises at least one of the following operations:

determining a display position of each virtual three-dimensional prop model in the at

least one virtual three-dimensional prop model according to a preset scene layout rule, the preset scene layout rule being a preset overlaying rule for the virtual three-dimensional prop model in the three-dimensional table game scene;

randomly determining a display attitude of each virtual three-dimensional prop model in the at least one virtual three-dimensional prop model; and

randomly determining a display number of each virtual three-dimensional prop model in the at least one virtual three-dimensional prop model.

8. The method of claim 7, wherein determining the display position of each virtual three-dimensional prop model in the at least one virtual three-dimensional prop model according to the preset scene layout rule comprises:

determining a target overlaying region corresponding to the at least one virtual three-dimensional prop model according to the preset scene layout rule respectively, wherein the virtual three-dimensional prop models corresponding to each kind of table game props corresponds to one target overlaying region respectively; and

randomly determining the display position of each virtual three-dimensional prop model in the target overlaying region.

9. The method of any one of claims 1 to 8, wherein performing the planar projection processing on the virtual target game scene to obtain the two-dimensional image data comprising the at least one kind of table game prop comprises:

performing the planar projection processing on the virtual target game scene based on a plurality of projection views to obtain a plurality of pieces of two-dimensional image data comprising the at least one kind of table game prop.

10. The method of any one of claims 1 to 8, wherein the table game prop comprises at least

one of:

tokens of a plurality of token face types, playing cards of a plurality of card face types, or a dice.

11. An image data generation apparatus, comprising:

a model acquisition unit, configured to acquire a plurality of virtual three-dimensional prop models respectively corresponding to a plurality of kinds of table game props, the table game prop being a game tool used in a table game scene;

a model determination unit, configured to, in a virtual three-dimensional table game scene, randomly determine at least one virtual three-dimensional prop model comprising at least one kind of table game prop from the plurality of virtual three-dimensional prop models;

an overlaying processing unit, configured to overlay the at least one virtual three-dimensional prop model to the virtual three-dimensional table game scene to form a virtual target game scene; and

an image generation unit, configured to perform planar projection processing on the virtual target game scene to obtain two-dimensional image data comprising the at least one kind of table game prop;

wherein apparatus further comprises:

a style transfer processing unit, configured to:

acquire a real table game scene image;

perform style processing on the real table game scene image and the two-dimensional image data to obtain a real table game scene feature map and a two-dimensional image feature map respectively;

perform style transfer on the two-dimensional image feature map using the real table game scene feature map to obtain a two-dimensional image transferred feature

map; and

perform back propagation based on the two-dimensional image transferred feature map to determine transferred image data after style transfer

12. An electronic device, comprising a processor and a memory configured to store a computer program capable of running in the processor,

wherein the processor is configured to run the computer program to:

acquire a plurality of virtual three-dimensional prop models respectively corresponding to a plurality of kinds of table game props, the table game prop being a game tool used in a table game scene;

in a virtual three-dimensional table game scene, randomly determine at least one virtual three-dimensional prop model comprising at least one kind of table game prop from the plurality of virtual three-dimensional prop models;

overlay the at least one virtual three-dimensional prop model to the virtual three-dimensional table game scene to form a virtual target game scene; and

perform planar projection processing on the virtual target game scene to obtain two-dimensional image data comprising the at least one kind of table game prop;

wherein the processor is further configured to run the computer program to:

acquire a real table game scene image;

perform style processing on the real table game scene image and the two-dimensional image data to obtain a real table game scene feature map and a two-dimensional image feature map respectively;

perform style transfer on the two-dimensional image feature map using the real table game scene feature map to obtain a two-dimensional image transferred feature map; and

perform back propagation based on the two-dimensional image transferred feature map to determine transferred image data after style transfer.

13. The electronic device of claim 12, wherein the processor is specifically configured to:

perform image collection on each kind of table game prop in the plurality of kinds of table game props based on a plurality of shooting views to obtain a view image sequence of the each kind of table game prop; and

perform three-dimensional model construction on the each kind of table game prop based on the view image sequence to obtain at least one virtual three-dimensional prop model corresponding to each kind of table game prop.

14. The electronic device of claim 14, wherein the processor is specifically configured to:

determine three-dimensional point cloud data corresponding to at least one table game prop in the each kind of table game prop based on the view image sequence; and

perform rendering processing on the three-dimensional point cloud data corresponding to the at least one table game prop to obtain a virtual three-dimensional prop model corresponding to the at least one table game prop.

15. The electronic device of any one of claims 12 to 14, wherein the processor is specifically configured to:

perform overlaying by taking the at least one virtual three-dimensional prop model as foreground information and the virtual three-dimensional table game scene as background information to obtain the virtual target game scene.

16. The electronic device of any one of claims 12 to 14, wherein the processor is specifically configured to:

determine display information of each virtual three-dimensional prop model in the at least one virtual three-dimensional prop model; and

overlay the at least one virtual three-dimensional prop model to the virtual three-dimensional table game scene based on the display information of the at least one virtual three-dimensional prop model to form the virtual target game scene.

17. The electronic device of any one of claims 12 to 16, wherein the processor is specifically configured to:

perform the planar projection processing on the virtual target game scene based on a plurality of projection views to obtain a plurality of pieces of two-dimensional image data comprising the at least one kind of table game prop.

18. A computer-readable storage medium having stored therein a computer program which is executed by a processor to implement the steps of the method of any one of claims 1 to 10.

19. A computer program, stored in a memory; wherein the computer program is executed by a processor to implement the steps of the method of any one of claims 1 to 10.