CLAIMS

What is claimed is:

1. A method for generating a projection of a main control object, performed by a terminal, the method comprising:

extracting an original bone model of the main control object from an ontology animation blueprint of the main control object, the main control object being an object that observes a virtual environment from a first-person perspective, the ontology animation blueprint being used for generating an ontology model of the main control object in the virtual environment, and the original bone model being a model of the main control object without bone deformation;

adjusting a posture of the original bone model based on a current state of the main control object to obtain a projection model, the projection model being a model configured to generate the projection of the main control object in the virtual environment; and

rendering the projection model to obtain the projection of the main control object.

2. The method according to claim 1, wherein the ontology animation blueprint comprises bone deformation processing; and

the extracting an original bone model of a main control object from an ontology animation blueprint of the main control object comprises:

extracting the original bone model from the ontology animation blueprint before the bone deformation processing of the ontology animation blueprint.

3. The method according to claim 2, wherein the bone deformation processing includes first bone deformation processing, wherein the first bone deformation processing is performed to scale a bone at an overlap region of a camera model and the original bone model of the main control object; and

the extracting the original bone model from the ontology animation blueprint before the bone deformation processing of the ontology animation blueprint comprises:

extracting the original bone model from the ontology animation blueprint before the first bone deformation processing of the ontology animation blueprint.

4. The method according to claim 2, wherein the bone deformation processing includes second bone deformation processing, wherein the second bone deformation processing is

performed to distort the original bone model when the main control object is in a target current state; and

the extracting the original bone model from the ontology animation blueprint before the bone deformation processing of the ontology animation blueprint comprises:

extracting the original bone model from the ontology animation blueprint before the second bone deformation processing of the ontology animation blueprint.

5. The method according to claim 1, wherein the original bone model comprises a child bone and a parent bone corresponding to the child bone, wherein the child bone is located at an end of a bone chain; and

the adjusting a posture of the original bone model based on the current state of the main control object, to obtain the projection model comprises:

determining a target position of the child bone based on the current state of the main control object;

determining a position of the child bone based on the target position;

determining a position of the parent bone based on the target position and the position of the child bone; and

adjusting the posture of the original bone model based on the positions of the child bone and the parent bone, to obtain the projection model.

6. The method according to claim 5, wherein the determining a position of the child bone based on the target position comprises:

determining a first vector from a first end point of the child bone to an end of the child bone, wherein the first end point of the child bone is an end point on the child bone far away from the end of the child bone;

determining a second vector from the first end point to the target position; and

rotating the child bone based on an included angle between the first vector and the second vector, to determine the position of the child bone.

7. The method according to claim 5, wherein the determining a position of the parent bone based on the target position and the position of the child bone comprises:

determining a third vector from a second end point of the parent bone to an end of the child

bone, wherein the second end point of the parent bone is an end point on the parent bone far away from the child bone;

determining a fourth vector from the second end point to the target position; and

rotating the parent bone based on an included angle between the third vector and the fourth vector, to determine the position of the parent bone.

8. The method according to any one of claims 1 to 4, wherein the ontology model comprises at least two component models, and the at least two component models comprise models of different parts on the main control object; and

the rendering the projection model to obtain the projection of the main control object comprises:

replacing the projection model with an integrated projection model, wherein the integrated projection model is a low-surface model obtained by merging the at least two component models, and a number of surfaces of the integrated projection model is smaller than a number of surfaces of the projection model; and

rendering the integrated projection model to obtain the projection of the main control object.

9. The method according to any one of claims 1 to 4, wherein the ontology animation blueprint comprises the following steps:

determining an initial animation posture of the main control object;

substituting the initial animation posture into a bone model of the main control object to obtain the original bone model;

performing the bone deformation processing on the original bone model to obtain an original bone model after bone deformation;

adjusting a posture of the original bone model after the bone deformation based on the current state, to obtain an ontology model of the main control object, wherein the ontology model is a model configured to generate an ontology of the main control object; and

rendering the ontology model to obtain the ontology of the main control object.

10. The method according to claim 9, wherein the bone model of the main control object comprises at least two component models, and the at least two component models comprise

models of different parts on the main control object; and

the determining an initial animation posture of the main control object comprises:

sequentially determining animation postures of the at least two component models; and

superimposing the animation postures of the at least two component models to obtain the initial animation posture.

11. The method according to claim 8, wherein the ontology model comprises at least two component models, and the at least two component models comprise models of different parts on the main control object; and

the rendering the ontology model to obtain the ontology of the main control object comprises:

rendering the at least two component models respectively to obtain rendering results of the at least two component models; and

synthesizing the rendering results of the at least two component models to obtain the ontology of the main control object.

12. An apparatus for generating a projection of a main control object, comprising:

an extraction module, configured to extract an original bone model of the main control object from an ontology animation blueprint of the main control object, the main control object being an object that observes a virtual environment from a first-person perspective, the ontology animation blueprint being used for generating an ontology model of the main control object in the virtual environment, and the original bone model being a model of the main control object without bone deformation;

an adjustment module, configured to adjust a posture of the original bone model based on a current state of the main control object to obtain a projection model, the projection model being a model configured to generate the projection of the main control object in the virtual environment; and

a rendering module, configured to render the projection model to obtain the projection of the main control object.

13. The apparatus according to claim 12, wherein the ontology animation blueprint comprises bone deformation processing; and

the extraction module is configured to extract the original bone model from the ontology animation blueprint before the bone deformation processing of the ontology animation blueprint.

14. The apparatus according to claim 13, wherein the bone deformation processing includes first bone deformation processing, wherein the first bone deformation processing is performed to scale a bone at an overlap region of a camera model and the original bone model of the main control object; and

the extraction module is further configured to extract the original bone model from the ontology animation blueprint before the first bone deformation processing of the ontology animation blueprint.

15. The apparatus according to claim 13, wherein the bone deformation processing includes second bone deformation processing, wherein the second bone deformation processing is performed to distort the original bone model when the main control object is in a target current state; and

the extraction module is further configured to extract the original bone model from the ontology animation blueprint before the second bone deformation processing of the ontology animation blueprint.

16. A computer device, comprising: a processor and a memory, the memory storing at least one instruction, the at least one instruction being loaded and executed by the processor to implement the method for generating a projection of a main control object according to any one of claims 1 to 11.

17. A computer-readable storage medium, storing at least one piece of program code, the program code being loaded and executed by a processor to implement the method for generating a projection of a main control object according to any one of claims 1 to 11.

18. A computer program product, comprising a computer program or instructions, the computer program or instructions, when executed by a processor, implementing a method for generating a projection of a main control object according to any one of claims 1 to 11.