CLAIMS

1. An image processing method, comprising:

obtaining an image;

obtaining a feature of a limb of a body based on the image, wherein the limb comprises an upper limb and/or a lower limb;

determining first-type movement information of the limb based on the feature; and

controlling movement of the limb of a controlled model according to the first-type movement information.

2. The method according to claim 1, wherein determining the first-type movement information of the limb based on the feature comprises:

detecting position information of a keypoint of the limb in the image; and

determining the first-type movement information according to the position information.

3. The method according to claim 2, further comprising:

detecting position information of a keypoint of a body skeleton in the image; and

wherein obtaining the feature of the limb of the body based on the image comprises:

determining the position information of the keypoint of the limb based on the position information of the keypoint of the body skeleton.

4. The method according to claim 3, wherein determining the first-type movement information according to the position information comprises:

determining a position box comprising a first part of the limb in the image according to the position information of the keypoint of the limb;

detecting position information of a keypoint of the first part based on the position box; and

obtaining first-type movement information of the first part based on the position information of the keypoint of the first part.

5. The method according to claim 4, wherein determining the position box comprising the first part of the limb in the image according to the position information of the keypoint of the limb comprises:

determining a position box comprising a hand in the image according to position information of a hand keypoint;

wherein detecting the position information of the keypoint of the first part based on the position box comprises:

detecting, based on the position box, position information of a keypoint corresponding to a finger joint and/or position information of a keypoint corresponding to a fingertip on the hand; and

wherein obtaining the first-type movement information of the first part based on the position information of the keypoint of the first part comprises:

obtaining movement information of a finger of the hand based on the position information of the keypoint of the first part.

6. The method according to any one of claims 3 to 5, wherein determining the first-type movement information of the limb based on the feature further comprises:

determining first-type movement information of a second part of the limb according to the position information of the keypoint of the limb.

7. The method according to any one of claims 1 to 6, further comprising:

determining, based on position information of keypoints of two parts in the limb

connected through a connection portion, second-type movement information of the connection portion.

8. The method according to claim 7, further comprising:

determining the second-type movement information of the connection portion according to features of at least two parts and a first movement constraint condition of the connection portion, wherein the at least two parts comprise the two parts connected through the connection portion; and

controlling movement of the connection portion of the controlled model according to the second-type movement information.

9. The method according to claim 8, wherein controlling the movement of the connection portion of the controlled model according to the second-type movement information comprises:

determining a control mode of controlling the connection portion according to a type of the connection portion; and

controlling the movement of the connection portion of the controlled model according to the control mode and the second-type movement information.

10. The method according to claim 9, wherein determining the control mode of controlling the connection portion according to the type of the connection portion comprises:

in response to that the connection portion is a first-type connection portion, determining that the control mode is a first-type control mode, wherein the first-type control mode is used for directly controlling movement of a connection portion in the controlled model corresponding to the first-type connection portion.

11. The method according to claim 9, wherein determining the control mode of

controlling the connection portion according to the type of the connection portion comprises:

in response to that the connection portion is a second-type connection portion, determining that the control mode is a second-type control mode, wherein the second-type control mode is used for indirectly controlling movement of a connection portion in the controlled model corresponding to the second-type connection portion, and the indirect control is achieved by controlling a part in the controlled model corresponding to a part other than the second-type connection portion.

12. The method according to claim 11, wherein controlling the movement of the connection portion of the controlled model according to the control mode and the second-type movement information comprises:

in response to that the control mode is the second-type control mode, obtaining, by decomposing the second-type movement information, first-type rotation information of the connection portion that a drawing portion draws the connection portion to rotate;

adjusting movement information of the drawing portion according to the first-type rotation information; and

controlling movement of the drawing portion in the controlled model by using the adjusted movement information of the drawing portion, to indirectly control the movement of the connection portion.

13. The method according to claim 12, further comprising:

obtaining, by decomposing the second-type movement information, second-type rotation information of the second-type connection portion rotating relative to the drawing portion; and

controlling, in the controlled model, rotation of the connection portion relative to the drawing portion by using the second-type rotation information.

14. The method according to claim 12 or 13, wherein

the first-type connection portion comprises an elbow and a knee;

the second-type connection portion comprises a wrist and an ankle;

in response to that the second-type connection portion is a wrist, the drawing portion corresponding to the wrist comprises an upper arm and/or a forearm; and

in response to that the second-type connection portion is an ankle, the drawing portion corresponding to the ankle comprises a shank and/or a thigh.

15. The method according to any one of claims 1 to 14, wherein

obtaining the feature of the limb of the body based on the image comprises: obtaining a first 2-Dimensional (2D) coordinate of the limb based on a 2D image; and

determining the first-type movement information of the limb based on the feature comprises: obtaining a first 3-Dimensional (3D) coordinate corresponding to the first 2D coordinate based on the first 2D coordinate and a conversion relation from a 2D coordinate to a 3D coordinate.

16. The method according to any one of claims 1 to 14, wherein

obtaining the feature of the limb of the body based on the image comprises: obtaining a second 3D coordinate of a skeleton keypoint of the limb based on a 3D image; and

determining the first-type movement information of the limb based on the feature comprises: obtaining a third 3D coordinate based on the second 3D coordinate.

17. The method according to claim 16, wherein obtaining the third 3D coordinate based on the second 3D coordinate comprises:

adjusting, based on the second 3D coordinate, a 3D coordinate of a skeleton keypoint of the limb corresponding to an occluded portion in the 3D image, to obtain the third 3D coordinate.

18. The method according to any one of claims 1 to 17, wherein the first-type movement information comprises a quaternion.

19. An image device, comprising:

a memory; and

a processor coupled to the memory and configured to execute computer executable instructions located on the memory, to implement the method according to any one of claims 1 to 18.

20. A non-volatile computer storage medium storing computer executable instructions that are executed by a processor to implement a method according to any one of claims 1 to 18.