CLAIMS

1. A method of controlling game states, comprising:

obtaining, in response to that a game is in a preset prop operating state, a video stream of a game region, wherein the game region comprises a placement region for placing one or more game items;

determining whether a game item is present in the placement region by performing detection on the video stream;

detecting, in response to that the game item is present in the placement region, an operating object for the game item based on the video stream;

determining, in response to detecting that the operating object for the game item is present, the game item is in a preset stable state; and

switching, in response to that the game item is in the preset stable state, the game to an item operating state.

2. The method according to claim 1, wherein determining whether the game item is present in the placement region by performing the detection on the video stream comprises:

obtaining a confidence of the game item in the placement region by performing game item detection for at least one image in the video stream; and

determining, in response to that the confidence of the game item in the placement region is greater than a preset confidence threshold, the game item is present in the placement region.

3. The method according to claim 1 or 2, further comprises:

obtaining a detection result obtained by performing game item detection for a plurality of successive images in the video stream, wherein the detection result comprises a position of the game item in each of the plurality of successive images;

determining, in response to that the plurality of successive images comprise at least one first target image, the game item is in the preset stable state;

wherein a first position corresponding to the game item in the first target image is within the placement region, and a distance between the first position with respect to each of second positions is smaller than a first preset distance threshold or a distance between the first position with respect to each of third positions is smaller than the first preset distance threshold,

the second positions indicate respective positions corresponding to the game item in n previous frames of the first target image,

the third positions indicate respective positions corresponding to the game item in n subsequent frames of the first target image, and

n is a positive integer.

4. The method according to any one of claims 1-3, wherein the placement region comprises at least two placement sub-regions, determining whether the game item is present in the placement region by performing the detection on the video stream comprises:

determining, for each of the placement sub-regions of the placement region, whether the game item is present in the placement sub-region by performing the detection on the placement sub-region based on the video stream; and

determining, in response to that the game item is present in any one of the placement sub-regions, the game item is present in the placement region.

5. The method according to claim 1, wherein detecting the operating object for the game item based on the video stream comprises:

detecting a second target image in which a game item is present in the placement region from the video stream; and

detecting the operating object for the game item from a previous frame of the second target image.

6. The method according to claim 5, wherein detecting the operating object for the game item from the previous frame of the second target image comprises:

detecting an operating object in the placement region from the previous frame of the second target image; and

determining, in response to detecting the operating object being present in the placement region from the previous frame of the second target image, that the operating object for the game item is present.

7. The method according to claim 5, further comprises:

determining, in response to detecting the operating object being present in the placement region from the previous frame of the second target image while not detecting the operating object from the second target image, the game item is in the preset stable state; or

determining, in response to detecting the operating object being present in the placement region from the previous frame of the second target image while a distance between the operating object and the game item in the second target image is greater than a second preset distance threshold, the game item is in the preset stable state.

8. The method according to any one of claims 1-7, further comprises:

determining, in response to not detecting the operating object for the game item based on the video stream, the game item is not in the preset stable state.

9. The method according to any one of claims 1-8, wherein

a prop operated in the prop operating state comprises a game coin; and

the game item comprises a card.

10. An apparatus for controlling game states, comprising:

an obtaining module, configured to obtain a video stream of a game region in response to that a game is in a preset prop operating state, wherein the game region comprises a placement region for placing one or more game items;

a detecting module, configured to determine whether a game item is present in the placement region by performing detection on the video stream;

a state module, configured to

detect an operating object for the game item based on the video stream in response to that the game item is present in the placement region; and

determine the game item is in a preset stable state in response to detecting that the operating object for the game item is present; and

a switching module, configured to switch the game to an item operating state in response to that the game item is in the preset stable state.

11. The apparatus according to claim 10, wherein the detecting module is specifically configured to:

obtain a confidence of the game item in the placement region by performing game item detection for at least one image in the video stream; and

in response to that the confidence of the game item in the placement region is greater than a preset confidence threshold, determine the game item is present in the placement region.

12. The apparatus according to claim 10 or 11, wherein the state module is further configured to:

obtain a detection result obtained by performing game item detection for a plurality of successive images in the video stream, wherein the detection result comprises a position of the game item in each of the plurality of successive images;

in response to that the plurality of successive images comprise at least one first target image, determine the game item is in the preset stable state;

wherein a first position corresponding to the game item in the first target image is within the placement region, and a distance between the first position with respect to each of second positions is smaller than a first preset distance threshold or a distance between the first position with respect to each of third positions is smaller than the first preset distance threshold, the second positions indicate respective positions corresponding to the game item in n previous frames of the first target image,

the third positions indicate respective positions corresponding to the game item in n subsequent frames of the first target image, and n is a positive integer.

13. The apparatus according to claim 10, wherein for detecting the operating object for the game item based on the video stream, the state module is specifically configured to:

detect a second target image in which a game item is present in the placement region from the video stream; and

detect the operating object for the game item from a previous frame of the second target image.

14. The apparatus according to claim 13, wherein the state module is further configured to:

determine, in response to detecting the operating object being present in the placement region from the previous frame of the second target image while not detecting the operating object from the second target image, the game item is in the preset stable state; or

determine, in response to detecting the operating object being present in the placement region from the previous frame of the second target image while a distance between the operating object and the game item in the second target image is greater than a second preset distance threshold, the game item is in the preset stable state.

15. An electronic device, comprising a memory, a processor and computer instructions stored in the memory and run on the processor, wherein the computer instructions are executed by the processor to implement the method according to any one of claims 1-9.

16. A computer readable storage medium, storing computer programs thereon, wherein the programs are executed by a processor to implement the method according to any one of claims 1-9.