

CLAIMS

1. A method of driving an interaction object, comprising:

obtaining an audio signal at a periphery of a display device;

obtaining, based on the audio signal, first driving data for driving the interaction object to respond; wherein obtaining, based on the audio signal, the first driving data for driving the interaction object to respond comprises: determining, in response to that target information is detected in the audio signal, a first specified action matching the target information; obtaining the first driving data for driving the interaction object to perform the first specified action;

driving, in response to outputting the first driving data, the interaction object to perform the first specified action, and monitoring, in response to outputting the first driving data, the audio signal for detecting a sound of a target object;

driving, based on a presence state of the sound of the target object in the audio signal, the interaction object to respond.

2. The method according to claim 1, wherein the first driving data comprises at least one of first audio driving data or first action driving data, the first audio driving data is regarding a sound generated by performing the first specified action;

monitoring, in response to outputting the first driving data, the audio signal for detecting the sound of the target object comprises one of:

driving, in response to outputting the first action driving data, the interaction object to perform the first specified action and

monitor the audio signal for detecting the sound of the target object; or

monitoring, in response to outputting a sound based on the first audio driving data, the audio signal for detecting the sound of the target object.

3. The method according to any of claims 1 to 2, wherein driving, based on the presence state of the sound of the target object in the audio signal, the interaction object to respond comprises:

driving, in response to that the sound of the target object is detected within a first preset

time, the interaction object to perform the first specified action repeatedly.

4. The method according to any of claims 1 to 2, wherein driving, based on the presence state of the sound of the target object in the audio signal, the interaction object to respond comprises:

driving, in response to that the sound of the target object is not detected within a first preset time, the interaction object to return to an initial posture after the first specified action is ended.

5. The method according to claim 4, further comprising:

in a case that the interaction object is driven to return to the initial posture after the first specified action is ended, obtaining, based on the audio signal, second driving data for driving the interaction object to respond, wherein the second driving data comprises at least one of second audio driving data or second action driving data;

driving, based on the second driving data, the interaction object to respond.

6. The method according to claim 5, wherein obtaining, based on the audio signal, the second driving data for driving the interaction object to respond comprises:

sending the audio signal to a server, such that the server generates, based on the audio signal, the second driving data for driving the interaction object to respond;

receiving the second driving data from the server.

7. The method according to claim 6, further comprising:

in a case that the interaction object is driven to return to the initial posture after the first specified action is ended, calling, in response to not receiving the second driving data from the server within a second preset time, preset third driving data for driving the interaction object to respond, wherein the third driving data comprises at least one of third audio driving data or third action driving data.

8. The method according to any of claims 1 to 7, wherein a plurality of audio signals are obtained by a plurality of sound detection modules distributed in different directions with respect to the display device, and the method further comprises:

determining an intensity of environmental noise in different directions based on the audio

signals respectively obtained by the sound detection modules;

driving, based on the intensity of environmental noise in different directions, the interaction object to guide the target object to change a position for interaction.

9. An apparatus for driving an interaction object, comprising:

a first obtaining unit, configured to obtain an audio signal at a periphery of a display device;

a second obtaining unit, configured to obtain, based on the audio signal, first driving data for driving the interaction object to respond; wherein the second obtaining unit is configured to: determine, in response to that target information is detected in the audio signal, a first specified action matching the target information; obtain the first driving data for driving the interaction object to perform the first specified action;

a monitoring unit, configured to drive, in response to outputting the first driving data, the interaction object to perform the first specified action , and also configured to monitor, in response to outputting the first driving data, the audio signal for detecting a sound of a target object;

the first driving unit, configured to drive, based on a presence state of the sound of the target object in the audio signal, the interaction object to respond.

10. The apparatus according to claim 9, wherein the first driving data comprises at least one of first audio driving data or first action driving data, the first audio driving data is regarding a sound generated by performing the first specified action;

the monitoring unit is configured to:

drive, in response to outputting the first action driving data, the interaction object to perform the first specified action, and monitor the audio signal for detecting the sound of the target object; or

monitor, in response to outputting a sound based on the first audio driving data, the audio signal for detecting the sound of the target object.

11. The apparatus according to any of claims 9 to 10, wherein the first driving unit is configured to:

drive, in response to that the sound of the target object is detected within a first preset

time, the interaction object to perform the first specified action repeatedly.

12. The apparatus according to any of claims 9 to 10, wherein the first driving unit is configured to:

drive, in response to that the sound of the target object is not detected within a first preset time, the interaction object to return to an initial posture after the first specified action is ended.

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

a second driving unit configured to:

in a case that the interaction object is driven to return to the initial posture after the first specified action is ended, obtain, based on the audio signal, second driving data for driving the interaction object to respond, wherein the second driving data comprises at least one of second audio driving data or second action driving data, and

drive, based on the second driving data, the interaction object to respond.

14. The apparatus according to claim 13, wherein when obtaining, based on the audio signal, the second driving data for driving the interaction object to respond, the second driving unit is configured to:

send the audio signal to a server, such that the server generates, based on the audio signal, the second driving data for driving the interaction object to respond;

receive the second driving data from the server.

15. The apparatus according to claim 14, further comprising:

a third driving unit configured to, in a case that the interaction object is driven to return to the initial posture after the first specified action is ended, call, in response to not receiving the second driving data from the server within a second preset time, preset third driving data for driving the interaction object to respond, wherein the third driving data comprises at least one of third audio driving data or third action driving data.

16. The apparatus according to any of claims 9 to 15, wherein a plurality of audio signals are obtained by a plurality of sound detection modules distributed in different directions with respect to the display device, and the apparatus further comprises:

a fourth driving unit configured to:

determine an intensity of environmental noise in different directions based on the audio signals respectively obtained by the sound detection modules, and

drive, based on the intensity of environmental noise in different directions, the interaction object to guide the target object to change a position for interaction.

17. A display device, wherein the display device is equipped with a transparent display screen for displaying an interaction object, and the display device performs a method according to any of claims 1 to 8 to drive the interaction object displayed in the transparent display screen to respond to a target object.

18. An electronic device, comprising:

a processor, and

a memory for storing a computer program executable on the processor,

wherein when executing the computer program, the processor is caused to implement the method according to any of claims 1 to 8.