CLAIMS

What is claimed is:

1. A method for cross-device login, the method comprising:

sending, by a device to be authorized, a login request to a server, wherein the login request comprises login information used for an application login;

sending, by the server to an authorized device, a verification code used to verify the device to be authorized, wherein the authorized device is a device that logs in by using the login information and that is authorized by the server;

broadcasting, by the authorized device, an audio signal, wherein the audio signal comprises at least the verification code;

obtaining, by the device to be authorized, the verification code from the audio signal after sensing the audio signal, and sending the verification code to the server for verification; and

allowing, by the server, the device to be authorized to log in after the verification succeeds.

2. The method for cross-device login according to claim 1, wherein before the sending, by the server to an authorized device, the verification code used to verify the device to be authorized, the method comprises:

instructing, by the server, the device to be authorized to perform audio sensing.

3. The method for cross-device login according to claim 2, wherein sending, by the server to the authorized device, the verification code used to verify the device to be authorized comprises:

generating, by the server, the verification code, and sending the verification code to the authorized device through an authorized channel between the server and the authorized device.

4. The method for cross-device login according to claim 3, wherein broadcasting, by the authorized device, the audio signal comprises:

encoding, by the authorized device, the verification code into the audio signal; and

broadcasting, by the authorized device, the audio signal based on near-field acoustic communication.

5. The method for cross-device login according to claim 4, wherein after the broadcasting, by the authorized device, the audio signal based on near-field acoustic communication, the method comprises:

monitoring, by the authorized device, whether the device to be authorized senses the audio signal within a predetermined time interval; and

returning, by the authorized device, a timeout indication to the server if the authorized device fails to monitor, within the predetermined time interval, that the device to be authorized senses the audio signal.

6. The method for cross-device login according to claim 2, further comprising:

sending, by the server, configuration information to the device to be authorized, wherein the configuration information comprises an encoding rule of the audio signal.

7. The method for cross-device login according to claim 6, wherein obtaining, by the device to be authorized, the verification code from the audio signal after sensing the audio signal comprises:

decoding, by the device to be authorized, the sensed audio signal according to the encoding rule, to obtain the verification code; and

sending, by the device to be authorized, the verification code to the server for verification.

8. The method for cross-device login according to claim 6, wherein the audio signal further comprises a request number corresponding to the login request.

9. The method for cross-device login according to claim 8, wherein sending, by the device to be authorized, the verification code to the server for verification comprises:

extracting, by the device to be authorized, the request number from the audio signal;

determining, by the device to be authorized, whether the request number extracted from the audio signal is consistent with a request number in the configuration information; and

in response to determining that the request number extracted from the audio signal is consistent with the request number in the configuration information, sending, by the device to be

authorized, the verification code to the server for verification.

10. The method for cross-device login according to claim 6, wherein the encoding rule defines codes based on frequencies and one or more start-stop flags.

11. The method for cross-device login according to claim 6, further comprising:

sending, by the server, the encoding rule to the authorized device when sending the verification code to the authorized device through the authorized channel.

12. The method for cross-device login according to claim 1, wherein the audio signal further comprises a request number corresponding to the login request; and

the sending, by the device to be authorized, the verification code to the server for verification comprises:

extracting, by the device to be authorized, the request number from the audio signal;

sending, by the device to be authorized, the request number extracted from the audio signal to the server;

determining, by the server, whether the request number extracted from the audio signal is consistent with a request number corresponding to the locally stored login request; and

in response to determining that the request number extracted from the audio signal is consistent with the request number corresponding to the locally stored login request, verifying, by the server, the received verification code.

13. The method for cross-device login according to any one of claims 1 to 12, wherein the audio signal further comprises a device identifier of the authorized device.

14. The method for cross-device login according to any one of claims 1 to 13, wherein the verification code comprises a random number generated by the server.

15. A system for cross-device login, the system comprising a plurality of modules configured to perform the method of any one of claims 1 to 14.