CLAIMS

What is claimed is:

1. A method comprising:

under control of one or more processors of a mobile device,

initiating an authentication via user behavior for an application transaction process and suspending the application transaction process before the authentication is successful;

acquiring a latest radio frame from a beacon and determining a distance parameter based on the radio frame after the authentication is initialized;

determining whether a specified distance condition is satisfied for the beacon and the mobile device; and

in response to a determination that the specified distance condition for the beacon and the mobile device is satisfied:

determining that the authentication is successful, resuming the application transaction process that was suspended previously, and

transmitting information to a server to enable the server to complete the application transaction process between the beacon and a transaction terminal corresponding to the beacon, wherein the information includes an identity of the beacon that is acquired from the radio frame, and transaction information and a transaction instruction that is pre-stored, wherein the transaction information includes at least one of a scanned ID card, an ID number, a phone number, a place of work, a gender, a name, a title of an invoice, and credit card information.

2. The method of claim 1, wherein the distance parameter comprises a received signal strength, and the specified distance condition comprises whether the received signal strength is greater than or equal to a specified signal strength.

3. The method of claim 2, wherein different specified signal strengths are configured for different beacons.

4. The method of claim 2, further comprising:
prior to the acquiring of the latest radio frame from the beacon after the authentication is initialized,
acquiring the specified signal strength from the radio frame in a specified location.

5. The method of claim 2, wherein a receiving distance corresponding to the received signal strength is not greater than 20 centimeters.

6. The method of claim 1, wherein the beacon includes a Bluetooth beacon, and the radio frame includes a beacon frame.

7. The method of claim 1, further comprising:
re-acquiring the latest radio frame from the beacon and continuing subsequent processing if the specified distance condition is not satisfied.

8. A device comprising:
one or more processors;
memory storing executable instructions that, when executed by one or more processors, cause the one or more processors to perform acts comprising:
initiating an authentication via user behavior for an application transaction process, and suspend the application transaction process before the authentication is successful;
acquiring a latest radio frame from a beacon, and determine a distance parameter based on the radio frame after the authentication is initialized;
determining whether a specified distance condition is satisfied for the beacon and the mobile device;

determining that the authentication is successful, and resumes the application transaction process that was suspended previously in response to a determination that the specified distance condition is satisfied for the beacon and the mobile device; and

transmitting information to a server to enable the server to complete the application transaction process between the beacon and a transaction terminal corresponding to the beacon, wherein the information includes an identity of the beacon that is acquired from the radio frame, and transaction information and a transaction instruction that is pre-stored, wherein the transaction information includes at least one of a scanned ID card, an ID number, a phone number, a place of work, a gender, a name, a title of an invoice, and credit card information.

9. The device of claim 8, wherein the distance parameter comprises a received signal strength, and the specified distance condition comprises whether the received signal strength is greater than or equal to a specified signal strength.

10. The device of claim 9, wherein different specified signal strengths are configured for different beacons.

11. The device of claim 9, wherein a data processing unit configured to:

prior to the acquiring of the latest radio frame from the beacon after the authentication is initialized,

acquire the specified signal strength from the radio frame in a specified location.

12. The device of claim 9, wherein a receiving distance corresponding to the received signal strength is not greater than 20 centimeters.

13. The device of claim 8, wherein the beacon includes a Bluetooth beacon, and the radio frame includes a beacon frame.

14. The device of claim 8, wherein the distance authentication unit is configured to re-acquire the latest radio frame from the beacon and continue subsequent processing if the specified distance condition is not satisfied.

15. One or more computer-readable media storing executable instructions that, when executed by one or more processors, cause the one or more processors to perform acts comprising:

initiating an authentication via user behavior for an application transaction process and suspending the application transaction process before the authentication is successful;

acquiring a latest radio frame from a beacon and determining a distance parameter based on the radio frame after the authentication is initialized;

determining whether a specified distance condition is satisfied for the beacon and the mobile device; and

in response to a determination that the specified distance condition for the beacon and the mobile device is satisfied:

determining that the authentication is successful,

resuming the application transaction process that was suspended previously; and

transmitting information to a server to enable the server to complete the application transaction process between the beacon and a transaction terminal corresponding to the beacon, wherein the information includes an identity of the beacon that is acquired from the radio frame, and transaction information and a transaction instruction that is pre-stored, wherein the transaction information includes at least one of a scanned ID card, an ID number, a phone number, a place of work, a gender, a name, a title of an invoice, and credit card information.

16. The one or more computer-readable media of claim 15, wherein the distance parameter comprises a received signal strength, and the specified distance condition

comprises whether the received signal strength is greater than or equal to a specified signal strength.

17. The one or more computer-readable media of claim 16, wherein a receiving distance corresponding to the received signal strength is not greater than 20 centimeters.

18. The one or more computer-readable media of claim 16, the acts further comprising:
prior to the acquiring of the latest radio frame from the beacon after the authentication is initialized,
acquiring the specified signal strength from the radio frame in a specified location.

19. The one or more computer-readable media of claim 15, wherein the beacon includes a Bluetooth beacon, and the radio frame includes a beacon frame.

20. The one or more computer-readable media of claim 15, the acts further comprising:
re-acquiring the latest radio frame from the beacon and continuing subsequent processing if the specified distance condition is not satisfied.