CLAIMS

What is claimed is:

1. A payment processing method, comprising:

acquiring, by a computer device, biometric feature information of a settlement user when a product settlement request is received, wherein the acquiring the biometric feature information of the settlement user comprises:

triggering, by the computer device, an image acquisition apparatus to acquire a settlement operation image on a settlement region;

in response to the image comprising a plurality of users, determining, by the computer device, respective distances from the plurality of users in the settlement operation image to the computer device using image processing techniques based on a sensor size of the image acquisition apparatus;

determining, by the computer device, one of the plurality of users in the settlement operation image with a shortest distance to the computer device as the settlement user; and

extracting, by the computer device, the biometric feature information of the settlement user from the settlement operation image;

in response to receiving a payment request,~~when a payment request is received~~, determining, by the computer device, whether the biometric feature information is successfully acquired; and

obtaining, by the computer device, a payment account of the settlement user according to the biometric feature information if the biometric feature information is successfully acquired.

2. The method according to claim 1, wherein the acquiring biometric feature information of a settlement user further comprises:

~~triggering an image acquisition apparatus to perform image acquisition on a settlement region, to obtain a settlement operation image;~~

detecting whether there is the biometric feature information in the settlement operation image; and

storing the biometric feature information in a buffer space if there is the biometric feature information in the settlement operation image, otherwise, the triggering an image acquisition apparatus to perform image acquisition on a settlement region is performed again.

3. The method according to claim 1, wherein the acquiring biometric feature information

of a settlement user comprises: triggering ~~an~~ the image acquisition apparatus to perform image acquisition on ~~a~~ the settlement region, and performing detection processing on a settlement operation image acquired each time; and the performing detection processing on a settlement operation image acquired each time comprises:

detecting whether there is the biometric feature information in the settlement operation image; and

comparing the biometric feature information with existing information in the buffer space if there is the biometric feature information in the settlement operation image; and

replacing the existing information with the biometric feature information if the biometric feature information does not match the existing information.

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

displaying prompt information to the settlement user during the storage of the biometric feature information in the buffer space, wherein the prompt information is used for prompting acquired biometric feature information.

5. The method according to claim 2 or 3, wherein the determining whether the biometric feature information is successfully acquired comprises:

detecting whether the biometric feature information is stored in the buffer space; and

if the biometric feature information is stored in the buffer space, determining that the biometric feature information is successfully acquired.

6. The method according to claim 1, wherein before the obtaining a payment account of the settlement user according to the biometric feature information, the method further comprises:

displaying a payment confirmation interface to the settlement user; and

when payment confirmation information inputted by the settlement user is received, performing the obtaining a payment account of the settlement user according to the biometric feature information.

7. The method according to claim 1 or 6, wherein the obtaining a payment account of the settlement user according to the biometric feature information comprises:

comparing to-be-compared information with more than one piece of pre-stored sample information, to obtain sample information matching the to-be-compared information, wherein

the to-be-compared information comprises the biometric feature information; and

determining a payment account associated with the sample information as the payment account of the settlement user.

8. The method according to claim 7, wherein the to-be-compared information further comprises verification information, and before the comparing to-be-compared information with more than one piece of pre-stored sample information, the method further comprises:

displaying a verification information input interface to the settlement user; and

when the verification information inputted by the settlement user is received, performing the comparing to-be-compared information with more than one piece of pre-stored sample information.

9. The method according to claim 1, wherein after the determining whether the biometric feature information is successfully acquired, the method further comprises:

displaying a payment mode selection interface to the settlement user if the biometric feature information fails to be acquired; and

when the payment mode selected by the settlement user is received, obtaining the payment account of the settlement user according to a payment mode selected by the settlement user.

10. A payment processing apparatus, comprising:

an acquisition module, configured to acquire biometric feature information of a settlement user when a product settlement request is received, wherein the acquiring the biometric feature information of the settlement user comprises:

triggering an image acquisition apparatus to acquire a settlement operation image on a settlement region;

in response to the image comprising a plurality of users, determining respective distances from the plurality of users in the settlement operation image to the apparatus using image processing techniques based on a sensor size of the image acquisition apparatus;

determining one of the plurality of users in the settlement operation image with a shortest distance to the apparatus as the settlement user; and

extracting the biometric feature information of the settlement user from the settlement operation image;

a determining module, configured to: when a payment request is received, determine whether the biometric feature information is successfully acquired; and

a first obtaining module, configured to obtain a payment account of the settlement user according to the biometric feature information if the biometric feature information is successfully acquired.

11. The apparatus according to claim 10, wherein the acquisition module comprises:

an image acquisition trigger unit, configured to trigger ~~an~~ the image acquisition apparatus to perform image acquisition on ~~a~~ the settlement region, to obtain ~~a~~ the settlement operation image;

a first detection unit, configured to detect whether there is the biometric feature information in the settlement operation image; and

a storage unit, configured to store the biometric feature information in a buffer space if there is the biometric feature information in the settlement operation image.

12. The apparatus according to claim 10, wherein the acquisition module comprises:

an image acquisition trigger unit, configured to trigger ~~an~~ the image acquisition apparatus to continuously perform image acquisition on ~~a~~ the settlement region; and

a detection processing unit, configured to perform detection processing on an operation image acquired each time, wherein

the detection processing unit comprises:

a first detection unit, configured to detect whether there is the biometric feature information in the settlement operation image; and

a first comparison unit, configured to compare the biometric feature information with existing information in the buffer space if there is the biometric feature information in the settlement operation image; and

a replacement unit, configured to replace the existing information with the biometric feature information if the biometric feature information does not match the existing information.

13. The apparatus according to claim 11 or 12, further comprising:

an information display module, configured to display prompt information to the settlement user during the storage of the biometric feature information in the buffer space, wherein the prompt information is used for prompting acquired biometric feature information.

14. The apparatus according to claim 11 or 12, wherein the determining module comprises:

a second detection unit, configured to detect whether the biometric feature information is

stored in the buffer space; and

a first determining unit, configured to: when the biometric feature information is stored in the buffer space, determine that the biometric feature information is successfully acquired.

15. The apparatus according to claim 10, further comprising:

a first interface display module, configured to display a payment confirmation interface to the settlement user; and

an account obtaining module, configured to: when payment confirmation information inputted by the settlement user is received, obtain the payment account of the settlement user according to the biometric feature information.

16. The apparatus according to claim 10 or 15, wherein the account obtaining module comprises:

a second comparison unit, configured to compare to-be-compared information with more than one piece of pre-stored sample information, to obtain sample information matching the to-be-compared information, wherein the to-be-compared information comprises the biometric feature information; and

a second determining unit, configured to determine a payment account associated with the sample information as the payment account of the settlement user.

17. The apparatus according to claim 16, wherein the to-be-compared information further comprises verification information, and the apparatus further comprises:

a second interface display module, configured to display a verification information input interface to the settlement user; and

the second comparison unit is configured to: when the verification information inputted by the settlement user is received, compare the to-be-compared information with the more than one piece of pre-stored sample information.

18. The apparatus according to claim 10, further comprising:

a second interface display module, configured to display a payment mode selection interface to the settlement user if the biometric feature information fails to be acquired; and

a second obtaining module, configured to: when the payment mode selected by the settlement user is received, obtain the payment account of the settlement user according to a payment mode selected by the settlement user.

19. A self-service checkout device, comprising a memory, a processor, and a computer program that is stored in the memory and runnable on the processor, wherein the processor, when executing the program, performs the steps of the method according to any one of claims 1 to 9.

20. A computer-readable storage medium, storing a computer program, wherein the program, when executed by a processor, performs the steps of the method according to any one of claims 1 to 9.