

# **ELECTRONIC PAYMENT**

## **TECHNICAL FIELD**

[0001] This disclosure relates to the field of electronic payment technologies, and in particular, to electronic payment.

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## **BACKGROUND**

[0002] With the rapid development of Internet technologies, electronic transactions have entered people's lives. However, existing payment methods require merchants to scan users' payment codes with handheld scanner guns or require users to point mobile devices at scanning windows of payment devices to complete payment, which takes up merchants' time and reduces payment efficiency.

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## **SUMMARY**

[0003] This disclosure provides an electronic payment method that can improve payment efficiency.

[0004] Implementations of this disclosure provide an electronic payment method, including the following: step S1: a payment device is provided, including a display screen and an NFC identification apparatus; step S2: a to-be-paid amount is displayed on a redirecting ball of the display screen; step S3: the display screen provides guidance for a first payment mode, including an image that the redirecting ball is adsorbed by the NFC identification apparatus and continuously bounces; and step S4: if the NFC identification apparatus succeeds in identifying an electronic device and payment succeeds, the display screen displays a payment result; or step S5: if the NFC identification apparatus fails to identify an electronic device, the display screen provides guidance for a second payment mode.

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[0005] Further, the NFC identification apparatus includes indicator lights arranged in a ring, and step S3 includes the following: in a bouncing process of the redirecting ball, a color of the

redirecting ball gradually changes, and lights of the indicator lights are lit up sequentially to form a ring.

[0006] Further, step S3 includes the following: in the bouncing process of the redirecting ball, the lights of the indicator lights are lit up sequentially to form the ring and then to form a semicircle.

5 [0007] Further, step S4 includes the following: the redirecting ball moves in a direction close to the electronic device and disappears from the display screen.

[0008] Further, the payment device includes a speaker, and step S3 includes the following: the speaker provides voice guidance.

10 [0009] Further, the guidance for the second payment mode includes a display image, and the display image includes the redirecting ball and guidance for operating the electronic device.

[0010] Further, the payment method further includes step S21: the display screen displays selection of payment modes.

[0011] Further, the payment modes include NFC payment and face scanning payment and/or code scanning payment.

15 [0012] Further, the electronic payment method further includes step S6: the display screen returns to an interface of step S21 after an NFC identification times out.

[0013] Further, step S6 includes the following: the redirecting ball disappears, and the display screen returns to the interface of step S21 after displaying a reminder of selecting another payment mode.

20 [0014] The electronic payment method in implementations of this disclosure adopts NFC payment, and the payment can be completed by simply touching the electronic device and the payment device, which improves payment efficiency compared with code scanning and face scanning, not only improving consumers' use experience, but also increasing the number of transactions for merchants and increasing merchants' turnover. In addition, the electronic payment  
25 method guides consumers to quickly complete payment through visual payment mode guidance, thereby further improving payment efficiency and consumers' use experience.

## BRIEF DESCRIPTION OF DRAWINGS

[0015] FIG. 1 is a schematic diagram illustrating a payment device, according to example implementations of this disclosure;

[0016] FIG. 2 is a block diagram illustrating an implementation of an electronic payment method, according to this disclosure; and

[0017] FIG. 3 is a block diagram illustrating another implementation of an electronic payment method, according to this disclosure.

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## DESCRIPTION OF EMBODIMENTS

[0018] The technical solutions in the embodiments (or referred to as "implementations") of this disclosure are clearly and comprehensively described here with reference to the accompanying drawings. When the following description relates to the accompanying drawings, unless specified otherwise, the same numbers in different accompanying drawings represent the same or similar elements.

[0019] If there are terms that relate to directional indications or positional relationships (for example, up, down, left, right, front, back, inside, outside, top, bottom, center, vertical, horizontal, longitudinal, transverse, length, width, counterclockwise, clockwise, axial, radial, and circumferential) in the embodiments of this disclosure, such terms are used merely to explain relative positional relationships, motion conditions, etc. between components in a specific posture (as shown in the accompanying drawings); and if the specific posture changes, the directional indications or the positional relationships change accordingly. In addition, the embodiments of this disclosure relate to terms such as "first" and "second", which are used merely for the purpose of convenience of description, and should not be construed as indicating or implying relative importance.

[0020] User information (including but not limited to user equipment information, user personal information, etc.) and data (including but not limited to data used for analysis, stored data, and displayed data, etc.) involved in this disclosure are all information and data that are authorized by users or fully authorized by all parties, and the collection, use, and processing of related data need to comply with related laws, regulations and standards of related countries and regions, and corresponding operation entries are provided for users to choose to authorize or reject.

[0021] Referring to FIG. 1, a payment device 100 in implementations of this disclosure includes a host 1 and an NFC identification apparatus 2. The NFC identification apparatus 2 is coupled to the host 1 by using a connection line (not shown in the figure), so as to perform signal

transmission.

[0022] The NFC identification apparatus 2 includes an NFC identification module 21 configured to touch an electronic device to complete electronic payment, which improves payment efficiency compared with code scanning and face scanning, not only improving consumers' shopping experience, but also increasing the number of transactions for merchants and increasing merchants' turnover.

[0023] The electronic device includes but is not limited to a mobile phone, a tablet, etc.

[0024] In some implementations, the NFC identification apparatus 2 includes indicator lights 22, and the indicator lights 22 are arranged in a ring and light emitted by the indicator lights 22 surrounds the NFC identification module 21 to provide light guidance, which can attract consumers' attention and is conducive to popularization and application of an NFC function.

[0025] In some implementations, the indicator light 22 can perform different guidance through different light forms when the NFC identification apparatus 2 is in different states. For example, the indicator light 22 can flash when the NFC identification apparatus 2 is in a normal standby state, so as to attract consumers' attention. The indicator light 22 can guide the consumers to make electronic payment in a form of a change of a color combined with a marquee light when guiding payment. When the payment is successful or failed, different colors can be displayed to inform the payment result in a form of light, and the form of the light is not limited in this disclosure.

[0026] The host 1 includes a display screen 11. The display screen 11 is configured to display advertising marketing and/or a list of purchased goods and/or a to-be-paid amount of the goods and/or payment mode guidance and/or a payment result, etc. The payment mode guidance can attract consumers to use an NFC function to make electronic payment, or guide the consumers how to use the NFC function to make the electronic payment, which is more user-friendly and can also improve payment efficiency.

[0027] In some implementations, the payment mode guidance displayed on the display screen 11 includes a picture, text, an animation, etc.

[0028] In some implementations, the display screen 11 displays a payment result, so that consumers can understand the payment result more intuitively, thereby improving shopping experience.

[0029] In some implementations, the payment device includes a speaker (not shown in the figure) to provide voice guidance. The speaker may be disposed in the host 1, or may be disposed

in the NFC identification apparatus 2.

**[0030]** Referring to FIG. 2 to FIG. 3, implementations of this disclosure provide an electronic payment method, including the following steps.

5 **[0031]** Step S1: Provide a payment device 100, including a display screen 11 and an NFC identification apparatus 2.

**[0032]** Step S2: Display a to-be-paid amount on a redirecting ball of the display screen 11.

**[0033]** Step S3: The display screen 11 provides guidance for a first payment mode, including an image that the redirecting ball is adsorbed by the NFC identification apparatus 2 and continuously bounces.

10 **[0034]** Step S4: If the NFC identification apparatus 2 succeeds in identifying an electronic device and payment succeeds, the display screen 11 displays a payment result.

**[0035]** Step S5: If the NFC identification apparatus 2 fails to identify an electronic device, the display screen 11 provides guidance for a second payment mode.

15 **[0036]** The electronic payment method provides visual payment mode guidance through redirecting of the redirecting ball to guide consumers to quickly complete payment, thereby further improving payment efficiency and consumers' use experience.

**[0037]** In some implementations, the guidance for the first payment mode includes first text guidance, for example, "Unlock your mobile phone, and touch to pay".

20 **[0038]** In some implementations, the NFC identification apparatus 2 includes indicator lights 22 arranged in a ring, and step S3 includes the following: in a bouncing process of the redirecting ball, a color of the redirecting ball gradually changes and lights of the indicator lights 22 are lit up sequentially to form a ring.

25 **[0039]** The indicator lights 22 and the redirecting ball guide consumers to touch the electronic device and the NFC identification apparatus 2 to make electronic payment. The guidance mode is not only visual but also cool, improves consumers' payment experience and is conducive to promotion of NFC payment.

**[0040]** In some implementations, step S3 includes the following: in the bouncing process of the redirecting ball, the lights of the indicator lights 22 are lit up sequentially to form the ring and then to form a semicircle, which is cooler.

30 **[0041]** In some implementations, step S4 includes the following: the redirecting ball moves in a direction close to the electronic device and disappears from the display screen, and the guidance

mode is not only visual but also cool.

**[0042]** In some implementations, the payment device 100 includes a speaker, and the step S3 includes the following: the speaker provides voice guidance, which provides more guidance modes, and is more humanistic.

5 **[0043]** In some implementations, the guidance for the second payment mode includes a display image, and the display image includes the redirecting ball and guidance for operating the electronic device.

**[0044]** In some implementations, the guidance for operating the electronic device includes second text guidance, for example, "NFC is not identified, please unlock your mobile phone first",  
10 "Turn on NFC", and "Touch again to pay".

**[0045]** In some implementations, the payment method further includes step S21: the display screen 11 displays selection of payment modes.

**[0046]** In some implementations, the payment modes include NFC payment and face scanning payment and/or code scanning payment, which provides more payment modes, and is more user-  
15 friendly.

**[0047]** In some implementations, the electronic payment method further includes step S6: the display screen 11 returns to an interface of step S21 after an NFC identification times out.

**[0048]** In some implementations, step S6 includes the following: the redirecting ball disappears, and the display screen returns to the interface of the selection of payment modes after  
20 displaying a reminder of selecting another payment mode.

**[0049]** In some implementations, step S3 includes the following: the display screen returns to the interface of step S21 after the NFC identification times out.

**[0050]** In some implementations, step S5 includes the following: if the NFC identification apparatus 2 succeeds in identifying an electronic device and payment succeeds, the display screen  
25 11 displays a payment result; or if the NFC identification apparatus 2 fails to identify an electronic device, the display screen 11 returns to the interface of step S21.

**[0051]** It is worthwhile to note that the technical solutions or technical features described in the above-mentioned embodiments can be combined or supplemented with each other when no conflict occurs. The scope of protection of this disclosure is not limited to the exact structures  
30 described in the above-mentioned embodiments and shown in the accompanying drawings; and any modifications, equivalent replacements, improvements, etc. made within the spirit and

principles of this disclosure shall fall within the scope of protection of this disclosure.

## CLAIMS

What is claimed is:

1. An electronic payment method, comprising:

5 step S1: providing a payment device, comprising a display screen and an NFC identification apparatus;

step S2: displaying a to-be-paid amount on a redirecting ball of the display screen;

step S3: providing, by the display screen, guidance for a first payment mode, comprising an image that the redirecting ball is adsorbed by the NFC identification apparatus and continuously bounces; and

10 step S4: displaying, by the display screen, a payment result if the NFC identification apparatus succeeds in identifying an electronic device and payment succeeds; or

step S5: providing, by the display screen, guidance for a second payment mode if the NFC identification apparatus fails to identify an electronic device.

15 2. The electronic payment method according to claim 1, wherein the NFC identification apparatus comprises indicator lights arranged in a ring, and step S3 comprises:

in a bouncing process of the redirecting ball, a color of the redirecting ball gradually changing, and lights of the indicator lights being lit up sequentially to form a ring.

3. The electronic payment method according to claim 2, wherein step S3 comprises:

20 in the bouncing process of the redirecting ball, the lights of the indicator lights being lit up sequentially to form the ring and then to form a semicircle.

4. The electronic payment method according to claim 3, wherein step S4 comprises:

the redirecting ball moving in a direction close to the electronic device and disappearing from the display screen.

25 5. The electronic payment method according to claim 1, wherein the payment device comprises a speaker, and step S3 comprises: providing, by the speaker, voice guidance.

6. The electronic payment method according to claim 1, wherein the guidance for the second payment mode comprises:

a display image, the display image comprising the redirecting ball and guidance for operating the electronic device.

30 7. The electronic payment method according to claim 1, wherein the payment method further

comprises step S21:

displaying, by the display screen, selection of payment modes.

8. The electronic payment method according to claim 7, wherein the payment modes comprise NFC payment and face scanning payment and/or code scanning payment.

5        9. The electronic payment method according to claim 7, wherein the electronic payment method further comprises step S6: the display screen returning to an interface of step S21 after an NFC identification times out.

10. The electronic payment method according to claim 9, wherein step S6 comprises:

the redirecting ball disappearing, and the display screen returning to the interface of step S21  
10    after displaying a reminder of selecting another payment mode.