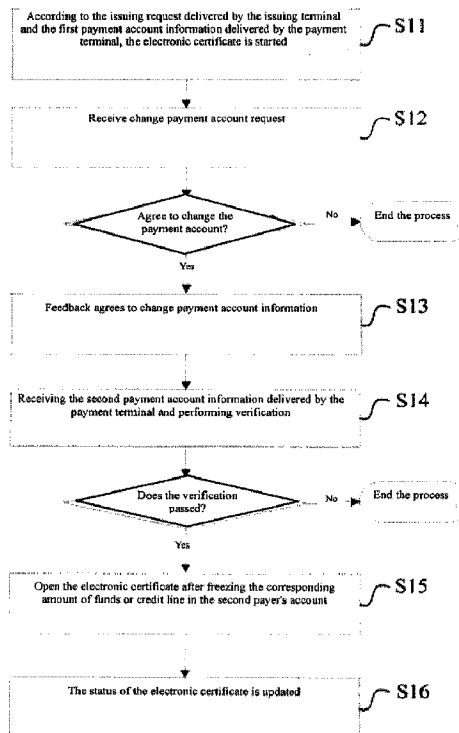




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(54) **Titre : PROCEDURE, DISPOSITIF ET SYSTEME POUR OUVRIR UN CERTIFICAT ELECTRONIQUE**
 (54) **Title: METHOD, DEVICE AND SYSTEM FOR OPENING ELECTRONIC CERTIFICATE**



(57) **Abrégé/Abstract:**

Disclosed are method and device for opening an electronic certificate, including: starting to open an electronic certificate according to an issuing request sent by an issuing end and first payment account information sent by a payment end; receiving a payment

(57) Abrégé(suite)/Abstract(continued):

account alteration request sent, and upon agreeing to alter a payment account, feeding back payment account alteration agreement information; receiving second payment account information sent by the payment end and performing verification; after verification has been passed, freezing funds or a credit limit, corresponding to a limit, in a second payment account and then opening the electronic certificate. Advantageously, opening an electronic certificate having a payment commitment function reduces the transaction risk, and allowing a payment account alteration request to be submitted at any time within an electronic certificate opening process without resubmitting electronic certificate opening request increases the flexibility and efficiency of opening the electronic certificate.

Abstract

Disclosed are method and device for opening an electronic certificate, including: starting to open an electronic certificate according to an issuing request sent by an issuing end and first payment account information sent by a payment end; receiving a payment account alteration request sent, and upon agreeing to alter a payment account, feeding back payment account alteration agreement information; receiving second payment account information sent by the payment end and performing verification; after verification has been passed, freezing funds or a credit limit, corresponding to a limit, in a second payment account and then opening the electronic certificate. Advantageously, opening an electronic certificate having a payment commitment function reduces the transaction risk, and allowing a payment account alteration request to be submitted at any time within an electronic certificate opening process without resubmitting electronic certificate opening request increases the flexibility and efficiency of opening the electronic certificate.

Title: Method, Device And System For Opening Electronic Certificate

Technical Field

[0001] The present invention relates to the field of network payment technology, and in particular, to a method, device, and system for opening an electronic certificate.

Background Technology

[0002] Payment refers to payment of money produced on the basis of economic contracts in the business activities. At present, many banks or enterprises have provided a network of payment services, allowing users to operate computers, mobile phones and other terminal equipment to achieve network payment, the way of the network payment provides users with a great convenience. In the existing network payment methods, most of the funds in the bank card are allocated directly to the other's account or to the third party organizations as security.

[0003] The traditional way of online payment, after the buyer's money order is issued, the funds will be transferred directly, the following situations often occur: the buyer has not received the commodity or services provided by the merchant, and its funds have been paid to the seller by the bank or the third party organization; or after the seller offers the commodity or services, the buyer is unable to pay the corresponding funds. Or the buyer transfers the money to the wrong account. At this stage there is a certain risk of online payment transactions, which cannot guarantee the interests of both buyers and sellers.

Technical problem

[0004] The main object of the present invention is to provide a method, device and system for opening an electronic certificate to reduce transaction risk and increase the flexibility and efficiency of opening an electronic certificate.

Problem solving solution

Technical solutions

[0005] In order to achieve the above objective, the present invention provides a method for opening an electronic certificate applied to a Funds-Management server, including the following steps:

[0006] The opening of the electronic certificate is started according to the issuing request delivered by the issuing terminal and the first payment account information delivered by the payment terminal.

[0007] During a process of issuing a certificate, receiving a change payment request delivered by

- the issuing terminal or the payment terminal, and when the payment account is agreed to be changed, the feedback agrees to change the information of the payment account.
- [0008] Receiving the second payment account information delivered by the payment terminal;
- [0009] Verifying the second payment account information;
- [0010] When the verification is passed, the second payer's account in the freezing of the corresponding amount of funds or credit line to open an electronic certificate.
- [0011] The present invention also proposes a method of opening an electronic certificate applied to the issuing terminal, including the following steps:
- [0012] Deliver a request to the payment terminal as an electronic certificate payment person's request;
- [0013] After receiving the agreement delivered by the payment terminal as the electronic certificate payment person, it delivers a certificate issuing request to the Funds-Management server and notifies the payment terminal so that the payment terminal delivers the first payment account information to the Funds-Management server;
- [0014] In the issuing process, deliver to the Funds-Management server to change the payment account request;
- [0015] After receiving the information delivered by the Funds-Management server agreeing to change the payment account, the payment terminal delivers a request for changing the payment account so that the payment terminal delivers the second payment account information to the Funds-Management server.
- [0016] The present invention also presents a device applied to the Funds-Management server to open an electronic certificate, including:
- [0017] The first card issuing module is used to start the electronic certificate opening according to the issuing request delivered by the issuing terminal and the first payment account information delivered by the payment terminal;
- [0018] The change module is used to receive a change payment request delivered by the issuing terminal or the payment terminal during a process of issuing a certificate, feedback the information of the change payment provider when the payment of the payment is approved, and receive the payment delivered by the second payment information;
- [0019] A verification module is used to verify the second payment account information;
- [0020] The second card issuing module is used to open an electronic certificate after the second payment account information is verified, freeze the corresponding amount of funds or credit in the second payment account.
- [0021] The present invention also proposes a device for opening electronic certificate applied to the issuing terminal, including:

- [0022] A payment request module is used to deliver a request to the payment terminal as an electronic certificate payment payer, and when receiving the consent delivered by the payment terminal as the information of an electronic certificate payment payer, notify the issuing request module;
- [0023] The issuing request module is used to deliver an issuing request to the Funds-Management server, and notify the payment terminal so that the payment terminal delivers the first payment account information to the Funds-Management server;
- [0024] The first change request module is used to deliver a request for changing a payment to the Funds-Management server during a process of issuing a certificate; and after receiving the information of changing a payment delivered by the Funds-Management server, the payment terminal delivers a request for changing the payment so that the payment terminal delivers the second payment information to the Funds-Management server.
- [0025] The present invention also provides a system for opening an electronic certificate, including an issuing terminal, a payment terminal and a Funds-Management server, wherein:
- [0026] The issuing terminal is used to deliver a request to the payment terminal to be used as an electronic certificate payment person; and after receiving the consent delivered by the payment terminal as the information of an electronic certificate payment person, deliver a certificate issuing request to the Funds-Management server and notifying the payment terminal;
- [0027] The payment terminal is used to feed back, according to the request, a request for permission of the electronic certificate payment person as information for paying the person for the electronic certificate; and after receiving the notification that the payment request has been delivered to the Funds-Management server. The Funds-Management server delivers the first payment account information; in the process of issuing a certificate, delivering a request for changing a payment account to the Funds-Management server; after receiving the information delivered by the Funds-Management server to agree to change the payment account, deliver the second payment account information to the Funds-Management server;
- [0028] The Funds-Management server is used to start the opening of an electronic certificate according to the issuing request and the first payment account information; and during a process of issuing a certificate, receiving the request for changing a payment account. When the payment account is changed, approving to change the information of the payment account; receiving the second payment account information and performing verification; and when the verification succeeds, freezing the corresponding amount of

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funds or credit limit in the second payment account, and opening an electronic certificate.

The beneficial effect of the invention

Beneficial effect

[0029] By adopting the method, device and system for opening the electronic certificate provided in the present invention, an electronic certificate with a committed payment function can be opened to reduce the transaction risk and allow the electronic certificate to be opened during the process of opening the electronic certificate. At any time proposed to change the request for payment of accounts, without having to re-submit the request to open electronic certificate, it improve the flexibility and efficiency of opened electronic certificate.

A brief description of the drawings

Brief Description

- [0030] Figure 1 is a flow chart of a first example of a method for opening an electronic certificate according to the present invention;
- [0031] Figure 2 is an interactive diagram of the main body when opening the electronic certificate in the example of the present invention;
- [0032] Figure 3 is a flow chart of the Funds-Management server verifying the second payment account information in the example of the present invention;
- [0033] Figure 4 is a flow chart of a second example of the method for opening an electronic certificate according to the present invention;
- [0034] Figure 5 is a flow chart of the third example of the method of opening an electronic certificate of the present invention;
- [0035] Figure 6 is a schematic block diagram of an example of the system for opening an electronic certificate of the present invention;
- [0036] Figure 7 is a schematic block diagram of a first example of the device for opening an electronic certificate of the present invention;
- [0037] Figure 8 is a schematic block diagram of a second example of the device for opening an electronic certificate according to the present invention.
- [0038] Figure 9 is a schematic block diagram of a third example of the device for opening an electronic certificate according to the present invention;
- [0039] Figure 10 is a schematic block diagram of a fourth example of a device for opening an electronic certificate according to the present invention.
- [0040] The realization of the object of the present invention, features and advantages of the present invention will be further described with reference to the accompanying drawings.

Examples of the Invention

Implementation pattern of the present invention

- [0041] It is to be understood that the specific examples described herein are merely illustrative of the invention but not intended to limit the invention.
- [0042] In the examples of the present invention, the Funds-Management server is a server of the funds management institution and the funds management institution refers to an organization capable of supporting the flow of funds, including but not limited to banks and other financial institutions (such as securities institutions, third-party payment platforms etc.), that is, Funds-Management server includes a bank server or other financial institution server.
- [0043] In this example of the present invention, an electronic certificate refers to a payment certificate of electronic Funds-Management server that is opened on the application of a licensee to freeze funds or credit lines and is opened in the name of a fund management institution and commit to settle the payment credit of electronic credit commitment according to the agreed conditions.
- [0044] In the example of the present invention, the issuer (usually the buyer) is the entity applying for the establishment of the electronic certificate to the fund management institution, which may be a natural person, a legal person or other organization, and the issuer is the terminal held by the issuer.
- [0045] In the example of the present invention, the payer, as the issuer's request, acts as the paying person of the electronic certificate, and with its account funds or credit limit as guaranty, an electronic certificate can provide a guaranty for the issuer. It can be a natural person, a legal person or his organization, and the payment terminal is a terminal held by the payer.
- [0046] In this example of the present invention, opening an electronic certificate is actually a Funds-Management server registering the frozen funds under the issuer's account.
- [0047] In this example of the present invention, the basic business process of electronic certificate is: Funds management institution establish electronic certificate in accordance with the amount of funds required to freeze the applicant's application, when agreed to meet the conditions for the settlement, the fund management institution will be paid to settle payment settlement. Details as follows:
- [0048] 1. After the transaction body forms an order, the issuer (e.g., buyer) applies for issuing a certificate to the issuing institution (i.e., the fund management institution that opens an electronic certificate, e.g., an issuing bank) (of course, the issuer can apply for issuing a certificate when forming a specific transaction order. Alternatively, when the transaction order is not formed, the issuer can voluntarily apply for issuing a certificate).
- [0049] 2. After the issuing agency accepts, open electronic certificate and freeze the corresponding amount of funds or credit line.

- [0050] 3. The recipient (such as the seller) applies to the receiving authority (such as the receiving bank) for a certificate.
- [0051] 4. After the certification body to verify the information to be certified, electronic certificate enters into the compliance period, and the certificate collector performs the performance (for example, the merchant delivers the commodity and can be regarded as performing the contract).
- [0052] 5. After receiving the certificate of compliance, the electronic certificate to obtain compliance information, change the status of the Bank Credit Certificate, electronic certificate into the receipt period, waiting for the delivery of commodity, and receive the commodity.
- [0053] 6. When the issuer to sign the commodity, that is the after receiving the transaction conditions of electronic certificate according to the payment terms of electronic certificate, the receiving issuing apply to the issuing agency for payment.
- [0054] 7. Issuing agency discharges the funds from the opening of the account, transfer the funds to the collection agencies, collection agencies will transfer funds to the collector's account.
- [0055] It should be understood that the above is only a way to use electronic certificate, it also can be used to purchase electronic services. In the purchase of services, such as living in the hotel transaction scenario, the hotel reservation is successful, that is, the hotel undertook a performance.
- [0056] Of course, electronic certificate can also be used to allocate funds. In different situations, the understanding of performance and receipt also changed. In other words, when a merchant provides a commodity or service, the status of the electronic certificate may directly flow through both the compliance period and the receipt period, directly entering the solution, such as face-to-face transactions.
- [0057] In the following, the opening procedure of the electronic certificate will be described in detail through specific examples.
- [0058] Please refer to Figure 1, Figure 2, a first example of the method for opening an electronic certificate of the present invention is proposed, and the method of this example is applied to a Funds-Management server, and the method includes the following steps:
- [0059] S11, The opening of the electronic certificate is started according to the issuing request delivered by the issuing terminal and the first payment account information delivered by the payment terminal.
- [0060] Specifically, as shown in Figure 2, the issuing terminal firstly delivers a request for requesting the payment terminal to the payment terminal as an electronic certificate payment person. After receiving the request, if the payment terminal agrees to pay as the

electronic certificate, the payment terminal delivers the consent information to the issuing terminal; after receiving the consent information, the issuing terminal delivers a disclosure request to the Funds-Management server, where the issuing request includes the opening amount; the Funds-Management server receives the issuing request delivered by the issuing terminal; the issuing terminal then delivers a notice of issuing the issuing request to the payment terminal; the payment terminal delivers the first payment account information to the Funds-Management server by logging in the corresponding webpage, application, etc. After the Funds-Management server receives the first payment account information, the opening of the electronic certificate according to the issuing request and the first payment account information specifically includes verifying the first payment account information, for example, verifying whether the balance of the funds of the first payment account or the balance of the credit limit is greater than or equal to the issuing amount of the card.

- [0061] S12, receiving a request to change a payment account, determining whether to agree to change a payment account. When it is agreed to change the payment account, step S13 is performed; otherwise, the process terminals or the information refusing to change the payment account is fed back and a query is made as to whether to continue to open the electronic certificate according to the first payment account information.
- [0062] In this step S12, before the Funds-Management server successfully establishes the electronic certificate according to the issuing request and the first payment account information, the payment terminal may at any time make a request for changing the payment account to the Funds-Management server.
- [0063] Specifically, as shown in Figure 2, during the payment process, the issuing terminal delivers a request for changing the payment account to the Funds-Management server. After receiving the request for changing the payee, the Funds-Management server verifies whether the request meets the condition, such as whether the time conditions (such as whether the electronic certificate was successfully opened) or other prohibited conditions, etc., after the approval of the agreed to change the payment account, when the audit is not passed, it does not agree to change the payment account.
- [0064] In some examples, the request to change the payment account may also be made by the issuing terminal to the Funds-Management server. Specifically, in the process of issuing a certificate, the issuing terminal delivers a request for changing the payment to the Funds-Management server, and after receiving the request for changing the payment, the Funds-Management server verifies whether the request meets the conditions and approves the payment after the approval is passed payment account, when the audit is not passed, it

- does not agree to change the payment account.
- [0065] S13, the feedback agrees to change the payer's information.
- [0066] When changing the payment account request made by the payment terminal, the Funds-Management server feeds back to the payment terminal the information that agrees to change the payment account.
- [0067] When the change of payment account request made by the issuing terminal, Funds-Management server feedback to the issuing terminal agreed to change the payment account information, the issuing terminal and then delivered to the payment terminal to change the payment request. Alternatively, the Funds-Management server may also deliver feedback to the payer and issuer agreeing to change the payment account.
- [0068] S14, receiving the second payment account information delivered by the payment terminal and performing verification. When the verification is passed, step S15 is executed. If the verification fails, the process terminal. At the same time, the information about the failure of opening the electronic certificate may also be fed back to the issuing terminal (or the issuing terminal and the payment terminal).
- [0069] Specifically, as shown in Figure 2, after receiving the information that the payment terminal agrees to change the payment account, the payment terminal delivers the second payment account information to the Funds-Management server.
- [0070] After receiving the second payment account information, the Funds-Management server terminates the process of opening the electronic certificate according to the first payment account information, and in response to the second payment account information, the electronic certificate is opened, that is, verify the information of the second payment account. The process of Funds-Management server verifying the second payment account information will be explained in detail later.
- [0071] S15, freezing the second payer account in the corresponding amount of funds or credit line to open an electronic certificate.
- [0072] In the step S15, after the second payment account information is verified, the Funds-Management server then froze the funds or credit limit equal to the amount of the opening card in the second payment account's account and opens an electronic certificate. It may further notify the issuing terminal (or the issuing terminal and the payment terminal) that the electronic certificate has been successfully opened.
- [0073] S16, the status of the updated electronic certificate is issued.
- [0074] In some examples, step S16 may also be omitted.
- [0075] In the aforementioned step S14, the second payment account information includes a second payment account name and a second payment account amount, the Funds-Management

server verify second payment account information specific process shown in Figure 3, including the following steps:

- [0076] S141, validating the second payment account name, when the second payment account name verification is successful, executing step S142; otherwise, the verification fails.
- [0077] S142, verifying the second payment account amount, judging whether the second payment account amount is greater than or equal to the issuing amount. When the second payment account amount is greater than or equal to the opening amount, the verification is passed; otherwise, the verification fails. Wherein, the second payment account amount is the fund balance or credit balance of the second payment account.
- [0078] In the foregoing example, only one change is made to the payment account. In fact, during the process of issuing the certificate, the payment account can be changed twice or more before the successful issuance of the certificate. For example, before step S15, the issuing terminal or the payment terminal may also request to the Funds-Management server for a second change to the payment account, and after the second change is made, the electronic certificate is successfully opened, and a third change can be made, and so on.
- [0079] Please refer to Figure 4 and Figure 2, a second example of the method for opening an electronic certificate of the present invention is proposed. The method of this example is applied to an issuing terminal. The method includes the following steps:
- [0080] S21, deliver a request to the payment terminal to pay for the person as an electronic certificate.
- [0081] S22. After receiving the consent delivered by the payment terminal as the payment information of the electronic certificate, the card issuing request is delivered to the Funds-Management server.
- [0082] Specifically, as shown in Figure 2, after receiving the request, the payment terminal delivers the consent information to the issuing terminal if the first payment terminal agrees to be the electronic certificate paying payer; after the issuing terminal receives the consent information, the Funds-Management server delivers an issuing request, which includes the issuing amount.
- [0083] S23, notifying the payment terminal to deliver the issuing request.
- [0084] Specifically, as shown in Figure 2, after issuing the issuing request to the Funds-Management server, the issuing request is delivered to the payment terminal notifying the issuing request, so that the payment terminal delivers the issuing request through the corresponding web page, application and other ways to Funds-Management server to deliver the first payment account information, Funds-Management server will be issued with electronic certificate.

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- [0085] S24. Deliver a request for changing the payment account to the Funds-Management server.
- [0086] In step S24, before the electronic certificate is successfully opened during the process of issuing the certificate, the issuing terminal may at any time deliver a request for changing the payment account to the Funds-Management server.
- [0087] S25, after receiving the information delivered by the Funds-Management server agreeing to change the payment account, delivering the request for changing the payment account to the payment terminal.
- [0088] Specifically, as shown in Figure 2, after receiving the request for changing the payment account, the Funds-Management server verifies whether the request meets the conditions, and when the verification is passed, feeds back to the issuing terminal the information for agreeing to change the payment account. After receiving the consent information, the issuing terminal delivers the request for changing the payment account to the payment terminal, so that the payment terminal delivers the second payment information to the Funds-Management server, and the Funds-Management server make electronic certificate issued according to the second payment account's information.
- [0089] Please refer to Figure 5 and Figure 2, a third example of a method for opening an electronic certificate according to the present invention is proposed. The method in this example is applied to a payment terminal, and the method includes the following steps:
- [0090] S31, feedback to the issuing terminal agree as electronic certificate payer's information.
- [0091] Specifically, as shown in Figure 2, after receiving the request delivered by the issuing terminal and requesting the payer as an electronic certificate payer, if the payment terminal agrees to act as an electronic certificate payer, deliver an agreement to the issuing terminal to act as a payer for electronic certificate.
- [0092] S32, After receiving the notification delivered by the issuing terminal that has deliver the issuing request to the Funds-Management server, the first payment account information is delivered to the Funds-Management server.
- [0093] S33. Deliver a request for changing the payment account to the Funds-Management server.
- [0094] In this step S33, before the Funds-Management server successfully establishes the electronic certificate according to the issuing request and the first payment account information, the payment terminal may at any time deliver a request for changing the payment account to the Funds-Management server.
- [0095] S34. After receiving the information delivered by the Funds-Management server that agrees to change the payment account, deliver the second payment account information to the Funds-Management server.
- [0096] Specifically, as shown in Figure 2, after receiving the request for changing the payment

account, the Funds-Management server verifies whether the request meets the conditions, and when the verification is passed, feeds back to the payment terminal the information for agreeing to change the payment account. After the payment terminal receives the information of agreeing to change the payment account, the second payment account information is delivered to the Funds-Management server.

- [0097] In the foregoing example, the issuer and the payer are two different entities, namely, the issuing terminal and the payment terminal are two different terminals. In fact, in some examples, the issuer is the payer, that is, the issuer applies for the electronic certificate to the fund management institution by using the first account as its guarantee. In this case, the issuing terminal and the payment terminal are the same terminal. The issuing terminal delivers the issuer's request and the first account information directly to the Funds-Management server. During the issuance process, the issuer prompts Funds-Management server to change the first payment account to the second payment account.
- [0098] Thus, the present invention opens the method of electronic certificate, in the process of opening electronic certificate, the fund management institution may at any time submit a request for the change to the payment account, without having to re-submit electronic certificate issuing request. On the one hand, the payment through the electronic certificate reduces the transaction risk; on the other hand, it increases the flexibility and efficiency of opening an electronic certificate.
- [0099] Referring to Figure 6, an example of a system for opening an electronic certificate according to the present invention is proposed, where the system includes an issuing terminal, a payment terminal, and a Funds-Management server, where:
- [0100] The issuing terminal is used to deliver a request to the payment terminal for requesting the electronic certificate payer, and receive feedback information from the payment terminal; and deliver the feedback message to the Funds-Management server when the feedback information of the payment terminal agrees to be the payment recipient of the electronic certificate request, and notify the payment terminal.
- [0101] In some examples, the issuing terminal may deliver a request for changing the payment account to the Funds-Management server during the issuance process; after receiving the information delivered by the Funds-Management server that the payment account is changed, deliver payment request to payment terminal.
- [0102] Payment terminal is used to receive the request delivered by the issuing terminal as the request of the electronic certificate payment user, and when agreeing to be the payment carrier of the electronic certificate, feedback the consent to the issuing terminal as the

information of the electronic certificate payment user; the Funds-Management server delivers the first payment account information; in the process of issuing a certificate, delivering a request for changing a payment account to the Funds-Management server; after receiving the information delivered by the Funds-Management server to agree to change the payment account, deliver the second payment account information to the Funds-Management server;

- [0103] In some examples, when the payment terminal receives the request for changing the payment account delivered by the issuing terminal, the payment terminal delivers the second payment account information to the Funds-Management server.
- [0104] Funds-Management server is used to receive the issuing request delivered by the issuing terminal and the first payment account information delivered by the payment terminal; to open an electronic certificate according to the issuing request and the first payment account information. In the process, receiving a request for changing a payment account, and when agreeing to change the payment account, feeding back the information of changing the payment account and notifying the first issuing module of terminating the process of opening the electronic certificate; and receiving the second payment account information delivered by the payment terminal after the verification is passed, the electronic certificate is frozen after freezing the corresponding amount of funds or credit limit in the second payment account.
- [0105] The system for providing an electronic certificate provided by the above example belongs to the same concept as the method example for opening an electronic certificate. For the specific implementation process, refer to the method example for details. The technical characteristics of the method are applicable in the system implementation cases.
- [0106] Figure 7, a first example of a device for opening an electronic certificate according to the present invention is proposed. The device in this example is applied to the foregoing Funds-Management server and includes a first issuing module, a changing module, a verification module and a second opening certificate module, wherein:
- [0107] The first card issuing module is used to receive the issuing request delivered by the issuing terminal and the first payment account information delivered by the payment terminal, and start the opening of the electronic certificate according to the issuing request and the first payment account information.
- [0108] The change module is used to receive a request to change the payment account during the issuing process, and feed back the information of the payment account when the payment account is approved to change, and receive the second payment account information delivered by the payment terminal.

- [0109] Specifically, after receiving the change payment request delivered by the issuing terminal or the first payment terminal, the modification module reviews the request of the payment changer, and when the approval is approved, changes the payment information of the payment account.
- [0110] The verification module is used to verify the second payment account information, and when the verification is passed, freeze the corresponding amount of funds or credit in the second payment account and then open an electronic certificate. The second payment account information includes the second payment account name and the second payment account amount.
- [0111] Specifically, the verification module first verifies the second payment account name; after the second payment account name verification succeeds, verifies whether the second payment account amount is greater than or equal to the opening card amount; when the second payment account amount is greater than or equal to when the opening amount is verified, the verification is passed; otherwise, the verification fails. Wherein, the second payment account amount is the fund balance or credit balance of the second payment account.
- [0112] The second card issuing module is used to open an electronic certificate after the second payment account information is verified, freeze the corresponding amount of funds or credit in the second payment account.
- [0113] Figure 8 is a second example of a device for opening an electronic certificate according to the present invention. The device in this example is also applied to the foregoing Funds-Management server. The difference between this example and the first example is that an additional one update module, the update module is set to open the electronic certificate after updating the state of electronic certificate has been opened.
- [0114] Figure 9, a third example of a device for opening an electronic certificate according to the present invention is proposed. The device in this example is applied to the issuing terminal. The device includes a payment request module, a verification request module, and a first change request module, wherein:
- [0115] The payment request module is used to deliver a request to the payment terminal for requesting payment as an electronic certificate and receive feedback information of the payment terminal. When receiving the feedback information, the payment request module is notified of the request as an electronic certificate payment person.
- [0116] The issuing request module is used to: when the feedback information of the payment terminal agrees to be the payment certificate of the electronic certificate, deliver an issuing request to the Funds-Management server and notify the payment terminal so that the

- payment terminal delivers the payment request to the Funds-Management server the payment account information.
- [0117] The first change request module is used to deliver a request for changing a payment to the Funds-Management server during a process of issuing a certificate; and after receiving the *information of changing a payment delivered by the Funds-Management server*, the payment terminal delivers a request for changing the payment so that the payment terminal delivers the second payment information to the Funds-Management server.
- [0118] Figure 10, a fourth example of a device for opening an electronic certificate according to the present invention is proposed. The device in this example is applied to the foregoing payment terminal. The device includes a payment request feedback module, a payment information delivery module and a second change request module, wherein:
- [0119] The payment request feedback module: set to receive the request delivered by the issuing terminal as the request of the electronic certificate payer, and agree to act as the information provider of the electronic certificate when agreeing to be the electronic certificate payer; otherwise, no response or feedback will be given to the information of the electronic certificate payer;
- [0120] The payment information delivery module: used to deliver the first payment account information to the Funds-Management server after receiving the notification delivered by the issuing terminal that has delivered the issuing request to the Funds-Management server;
- [0121] The second change request module is used to deliver a request for changing a payment to the Funds-Management server during a process of issuing a certificate; and after receiving the *information of changing a payment delivered by the Funds-Management server*, the payment terminal delivers the second payment information to the Funds-Management server.
- [0122] The device for providing the electronic certificate provided by the above example belongs to the same concept as the method example for opening the electronic certificate. For the specific implementation process, refer to the method example for details. The technical features in the method examples are the same as those in the device example corresponding to the applicable to the implementation of the device, not repeat here.
- [0123] Therefore, in the device for opening the electronic certificate of the present invention, the payment account may be proposed to be changed at any time during the process of opening the electronic certificate without the need to re-submit the electronic certificate issuing request. On the one hand, the payment through the electronic certificate reduces the transaction risk; on the other hand, it increases the flexibility and efficiency of opening an electronic certificate.

- [0124] A person skilled in the art will understand that the realization of all or part of the steps of the method described above may be controlled by a program to control the associated hardware completion, which may be stored in a computer-readable storage medium. The storage medium may be ROM / RAM, a magnetic disk, an optical disk, etc.
- [0125] A person of skill in the art considers the problems disclosed herein and sought to be solved by the present disclosure to be exclusively computer problems and contemplates only solutions to those problems that include essential computer elements. Abstract ideas, mere schemes, plans, rules, or mental processes that do not include computer elements are expressly excluded from this application.
- [0126] It is to be understood that the above is only a preferred example of the present invention and is not intended to limit the scope of the invention as a matter of limitation, either by way of equivalent construction or equivalent process transformation using the present specification and the accompanying drawings, directly or indirectly used in other related technical fields, which are included in the scope of the patent protection of the present invention.
- [0127] By adopting the method, device and system for opening the electronic certificate provided in the present invention, an electronic certificate with a committed payment function can be opened to reduce the transaction risk and allow the electronic certificate to be opened during the process of opening the electronic certificate. At any time proposed to change the request for payment of accounts, without having to re-submit the request to open electronic certificate, it improve the flexibility and efficiency of opened electronic certificate.

Claims:

1. A computer system for opening an electronic certificate in an electronic transaction, the system comprising:

a terminal for issuing the electronic certificate configured to:

deliver a request for changing a payment account information in an opening process to a Funds-Management server, after delivering a request for opening the electronic certificate to the Funds-Management server, wherein the request for opening the electronic certificate includes an amount of funds for opening the electronic certificate;

a payment terminal configured to deliver a first payment account information to the Funds-Management server;

the Funds-Management server configured to:

during a process of opening the electronic certificate, receive a second payment account information delivered by the payment terminal when accepting to change the payment account information before an amount of balance is frozen in a first payment account for improving flexibility of opening the electronic certificate and reducing payment risk, wherein the process of opening the electronic certificate is based on the request for opening the electronic certificate and the first payment account information;

verify the second payment account information; and

where if verification of the second payment account information is passed, freeze an amount of balance or credit amount in a payment account to open the electronic certificate, wherein the amount of balance or credit amount is equal to the amount of funds in the electronic certificate.

2. The system of claim 1, wherein the request for changing the payment account information may be delivered by the payment terminal.
3. The system of claim 1, wherein the terminal for issuing the electronic certificate is held and controlled by a buyer.
4. The system of claim 3, wherein the buyer may be a payer.
5. The system of any one of claims 1 to 4, wherein the terminal for issuing the electronic certificate is configured to be the payment terminal.
6. The system of claim 1, wherein the Funds-Management server is further configured to:

verify a second payment account name;

verify whether fund balance or credit limit balance in the second payment account is more than or equal to the amount of funds for opening the electronic certificate, when verification for the second payment account name is passed;

where if the fund balance or the credit limit balance in the second payment account is more than or equal to the amount of funds for opening the electronic certificate, determine that verification of amount of funds is passed; and

where if the fund balance or the credit limit balance in the second payment account is less than the amount of funds for opening the electronic certificate, determine that verification of amount of funds is failed.

7. The system of any one of claims 1 to 6, wherein the Funds-Management server is further configured to update status of the electronic certificate to be “has been opened”, when the electronic certificate is opened.
8. The system of any one of claims 1 to 7, wherein the electronic certificate is an Internet based financial instrument that is paid by a Funds-Management institution credit commitment.
9. The system of claim 8, wherein the Funds-Management institution is an institution that can support capital flows.
10. The system of any one of claims 8 to 9, wherein the Funds-Management institution includes a bank.
11. The system of any one of claims 8 to 9, wherein the Funds-Management institution includes a financial institution.
12. The system of any one of claims 8 to 9, wherein the Funds-Management institution includes a third-party payment platform.
13. The system of any one of claims 1 to 11, wherein the Funds-Management server includes a bank server.
14. The system of any one of claims 1 to 11, wherein the Funds-Management server includes a financial institution server.
15. A computer implemented method for opening an electronic certificate in an electronic transaction, the method comprising:

a terminal for issuing the electronic certificate delivers a request for changing a payment account information to a Funds-Management server, after delivering a request for opening the electronic certificate to the Funds-Management server, wherein the request for opening the electronic certificate includes an amount of funds for opening the electronic certificate; a payment terminal delivers a first payment account information to the Funds-Management server;

during a process of opening the electronic certificate, the Funds-Management server receives a second payment account information delivered by the payment terminal when accepting to change the payment account information before an amount of balance is frozen in a first payment account for improving flexibility of opening the electronic certificate and reducing payment risk, wherein the process of opening the electronic certificate is based on the request for opening the electronic certificate and the first payment account information;

the Funds-Management server verifies the second payment account information; and

where if verification of the second payment account information is passed, the Funds-Management server freezes an amount of balance or credit amount in a payment account to open the electronic certificate, wherein the amount of balance or credit amount is equal to the amount of funds in the electronic certificate.

16. The method of claim 15, wherein the terminal for issuing the electronic certificate is held and controlled by a buyer.
17. The method of claim 16, wherein the buyer may be a payer.
18. The method of any one of claims 15 to 17, wherein the terminal for issuing the electronic certificate is configured to be the payment terminal.
19. The method of claim 15 further includes:

the Funds-Management server verifies a second payment account name;

the Funds-Management server verifies whether fund balance or credit limit balance in the second payment account is more than or equal to the amount of funds for opening the electronic certificate, when verification for the second payment account name is passed;

where if the fund balance or the credit limit balance in the second payment account is more than or equal to the amount of funds for opening the electronic certificate, determines that verification of amount of funds is passed; and

where if the fund balance or the credit limit balance in the second payment account is less than the amount of funds for opening the electronic certificate, determines that verification of amount of funds is failed.

20. The method of any one of the claims 15 to 19 further includes that the Funds-Management server updates status of the electronic certificate to be “has been opened”, when the electronic certificate is opened.
21. The method of any one of claims 15 to 20, wherein the electronic certificate is an Internet based financial instrument that is paid by a Funds-Management institution credit commitment.
22. The method of claim 21, wherein the Funds-Management institution is an institution that can support capital flows.
23. The method of any one of claims 21 to 22, wherein the Funds-Management institution includes a bank.
24. The method of any one of claims 21 to 22, wherein the Funds-Management institution includes a financial institution.

25. The method of any one of claims 21 to 22, wherein the Funds-Management institution includes a third-party payment platform.
26. The method of any one of claims 15 to 25, wherein the Funds-Management server includes a bank server.
27. The method of any one of claims 15 to 25, wherein the Funds-Management server includes a financial institution server.
28. A computer implemented method for opening an electronic certificate in an electronic transaction, applied in a Funds-Management server, the method comprising:

during a process of opening the electronic certificate, receiving a request for changing a payment account information delivered by a terminal for issuing the electronic certificate or the payment terminal in an opening process, wherein the request for changing the payment account information includes an amount of funds for opening the electronic certificate and delivered to the Funds-Management server after a request for opening the electronic certificate is delivered by the terminal for issuing the electronic certificate, wherein the process of opening the electronic certificate is based on the request for opening the electronic certificate and a first payment account information;

receiving a second payment account information delivered by the payment terminal when accepting to change the payment account information before an amount of balance is frozen in a first payment account for improving flexibility of opening the electronic certificate and reducing payment risk;

verifying the second payment account information; and

where if verification of the second payment account information is passed, freezing an amount of balance or credit amount in a payment account to open the electronic certificate, wherein the amount of balance or credit amount is equal to the amount of funds in the electronic certificate.

29. The method of claim 28, wherein the terminal for issuing the electronic certificate is held and controlled by a buyer.

30. The method of claim 29, wherein the buyer may be a payer.

31. The method of any one of claims 28 to 30, wherein the terminal for issuing the electronic certificate is configured to be the payment terminal.

32. The method of claim 28 further includes:

verifying a second payment account name;

verifying whether fund balance or credit limit balance in the second payment account is more than or equal to the amount of funds for opening the electronic certificate, when verification for the second payment account name is passed;

where if the fund balance or the credit limit balance in the second payment account is more than or equal to the amount of funds for opening the electronic certificate, determining that verification of amount of funds is passed; and

where if the fund balance or the credit limit balance in the second payment account is less than the amount of funds for opening the electronic certificate, determining that verification of amount of funds is failed.

33. The method of any one of claims 28 to 32 further includes updating status of the electronic certificate to be “has been opened”, when the electronic certificate is opened.

34. The method of any one of claims 28 to 33, wherein the electronic certificate is an Internet based financial instrument that is paid by a Funds-Management institution credit commitment.
35. The method of claim 34, wherein the Funds-Management institution is an institution that can support capital flows.
36. The method of any one of claims 34 to 35, wherein the Funds-Management institution includes a bank.
37. The method of any one of claims 34 to 35, wherein the Funds-Management institution includes a financial institution.
38. The method of any one of claims 34 to 35, wherein the Funds-Management institution includes a third-party payment platform.
39. The method of any one of claims 28 to 38, wherein the Funds-Management server includes a bank server.
40. The method of any one of claims 28 to 38, wherein the Funds-Management server includes a financial institution server.
41. A computer implemented device for opening an electronic certificate in an electronic transaction, applied in a Funds-Management server, the device comprising:

a first issuing module configured to start a process of opening the electronic certificate according to a request for opening the electronic certificate and a first payment account information, wherein the request for opening the electronic certificate is delivered by a terminal for issuing the electronic certificate, wherein the request for opening the electronic certificate includes an amount of funds for opening the electronic certificate, wherein the first payment account information is delivered by the payment terminal;

a change module configured to:

during the process of opening the electronic certificate, receive a request for changing a payment account information delivered by the terminal for issuing the electronic certificate or the payment terminal; and

receive a second payment account information delivered by the payment terminal when accepting to change the payment account information before an amount of balance is frozen in a first payment account for improving flexibility of opening the electronic certificate and reducing payment risk, wherein the process of opening the electronic certificate is based on the request for opening the electronic certificate and the first payment account information;

a verification module configured to:

verify the second payment account information; and

where if verification of the second payment account information is passed, freeze an amount of balance or credit amount in a payment account to open the electronic certificate, wherein the amount of balance or credit amount is equal to the amount of funds in the electronic certificate.

42. The device of claim 41, wherein the verification module is further configured to:

verify a second payment account name;

verify whether fund balance or credit limit balance in the second payment account is more than or equal to the amount of funds for opening the electronic certificate, when verification for the second payment account name is passed;

where if the fund balance or the credit limit balance in the second payment account is more than or equal to the amount of funds for opening the electronic certificate, determine that verification of amount of funds is passed; and

where if the fund balance or the credit limit balance in the second payment account is less than the amount of funds for opening the electronic certificate, determine that verification of amount of funds is failed.

43. The device of any one of claims 41 to 42, further includes an update module.
44. The device of claim 43, wherein the update module is configured to update status of the electronic certificate to be “has been opened”, when the electronic certificate is opened.
45. The device of claim 41, wherein the terminal for issuing the electronic certificate is held and controlled by a buyer.
46. The device of claim 45, wherein the buyer may be a payer.
47. The device of any one of claims 41 to 46, wherein the terminal for issuing the electronic certificate is configured to be the payment terminal.
48. The device of any one of the claims 41 to 47, wherein the electronic certificate is an Internet based financial instrument that is paid by a Funds-Management institution credit commitment.
49. The device of claim 48, wherein the Funds-Management institution is an institution that can support capital flows.
50. The device of any one of claims 48 to 49, wherein the Funds-Management institution includes a bank.

51. The device of any one of claims 48 to 49, wherein the Funds-Management institution includes a financial institution.
52. The device of any one of claims 48 to 49, wherein the Funds-Management institution includes a third-party payment platform.
53. The device of any one of claims 41 to 52, wherein the Funds-Management server includes a bank server.
54. The device of any one of claims 41 to 52, wherein the Funds-Management server includes a financial institution server.
55. A computer implemented method for opening an electronic certificate in an electronic transaction, applied in a terminal for issuing the electronic certificate, the method comprising:
- delivering a request for paying the electronic certificate as a payer to a payment terminal;
 - delivering a request for opening the electronic certificate to a Funds-Management server when receiving an acceptance of the request for paying the electronic certificate from the payment terminal, wherein the request for opening the electronic certificate includes an amount of funds for opening the electronic certificate; and
 - notifying the payment terminal so that the payment terminal delivers a first payment account information to the Funds-Management server; and

during a process of opening the electronic certificate by the Funds-Management server, delivering a request for changing a payment account information to the Funds-Management server when receiving an acceptance from the Funds-Management server for changing the payment account information, to enable the payment terminal to deliver a second payment account information to the Funds-Management server before an amount of balance is frozen in a first payment account, wherein the process of opening the electronic certificate is based on the request for opening the electronic certificate and the first payment account information.

56. The method of claim 55, wherein the electronic certificate is an Internet based financial instrument that is paid by a Funds-Management institution credit commitment.
57. The method of claim 56, wherein the Funds-Management institution is an institution that can support capital flows.
58. The method of any one of claims 56 to 57, wherein the Funds-Management institution includes a bank.
59. The method of any one of claims 56 to 57, wherein the Funds-Management institution includes a financial institution.
60. The method of any one of claims 56 to 57, wherein the Funds-Management institution includes a third-party payment platform.
61. The method of any one of claims 55 to 60, wherein the Funds-Management server includes a bank server.
62. The method of any one of claims 55 to 60, wherein the Funds-Management server includes a financial institution server.

63. A computer implemented device for opening an electronic certificate in an electronic transaction, applied in a terminal for issuing the electronic certificate, the device comprising:

a payment request module configured to deliver a request for paying the electronic certificate as a payer to a payment terminal and notify an issuing request module when receiving an acceptance of the request for paying the electronic certificate from the payment terminal;

the issuing request module configured to:

notify the payment terminal so that the payment terminal delivers a first payment account information to a Funds-Management server, after delivering a request for opening the electronic certificate to the Funds-Management server, wherein the request includes an amount of funds for opening the electronic certificate;

a first change request module configured to, during a process of opening the electronic certificate by the Funds-Management server, deliver a request for changing a payment account information in an opening process to the Funds-Management server when receiving an acceptance from the Funds-Management server for changing the payment account information, to enable the payment terminal to deliver a second payment account information to the Funds-Management server before an amount of balance is frozen in a first payment account, wherein the process of opening the electronic certificate is based on the request for opening the electronic certificate and the first payment account information.

64. The device of claim 63, wherein the terminal for issuing the electronic certificate is held and controlled by a buyer.

65. The device of claim 64, wherein the buyer may be a payer.

66. The device of any one of claims 63 to 65, wherein the terminal for issuing the electronic certificate is configured to be the payment terminal.
67. The device of any one of the claims 63 to 66, wherein the electronic certificate is an Internet based financial instrument that is paid by a Funds-Management institution credit commitment.
68. The device of claim 67, wherein the Funds-Management institution is an institution that can support capital flows.
69. The device of any one of claims 63 to 68, wherein the Funds-Management institution includes a bank.
70. The device of any one of claims 63 to 68, wherein the Funds-Management institution includes a financial institution.
71. The device of any one of claims 63 to 68, wherein the Funds-Management institution includes a third-party payment platform.
72. The device of any one of claims 63 to 71, wherein the Funds-Management server includes a bank server.
73. The device of any one of claims 63 to 71, wherein the Funds-Management server includes a financial institution server.

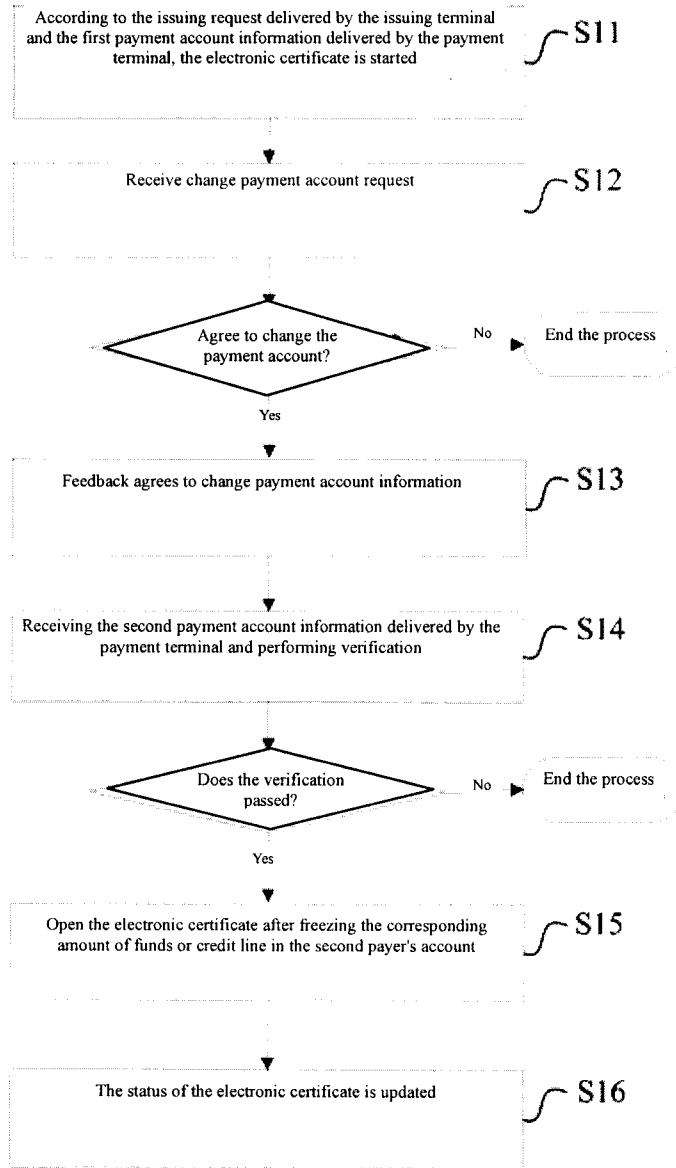


Figure 1

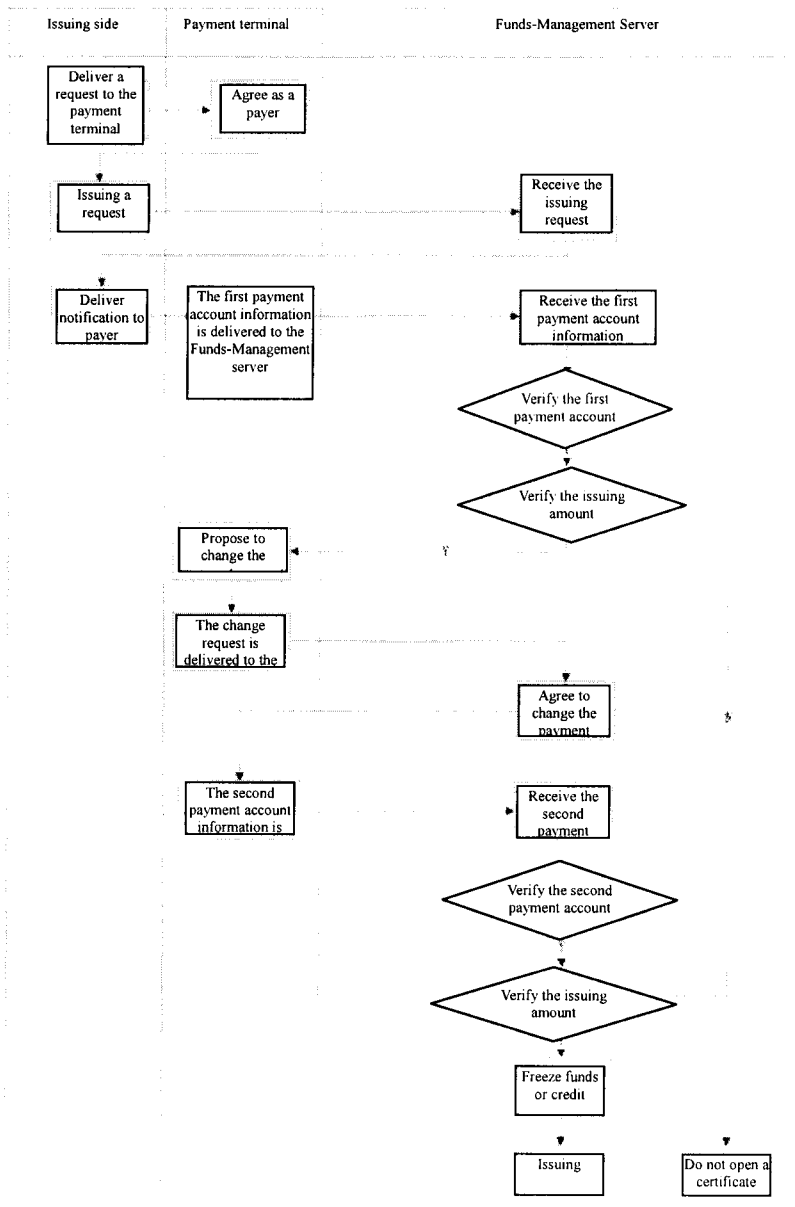


Figure 2

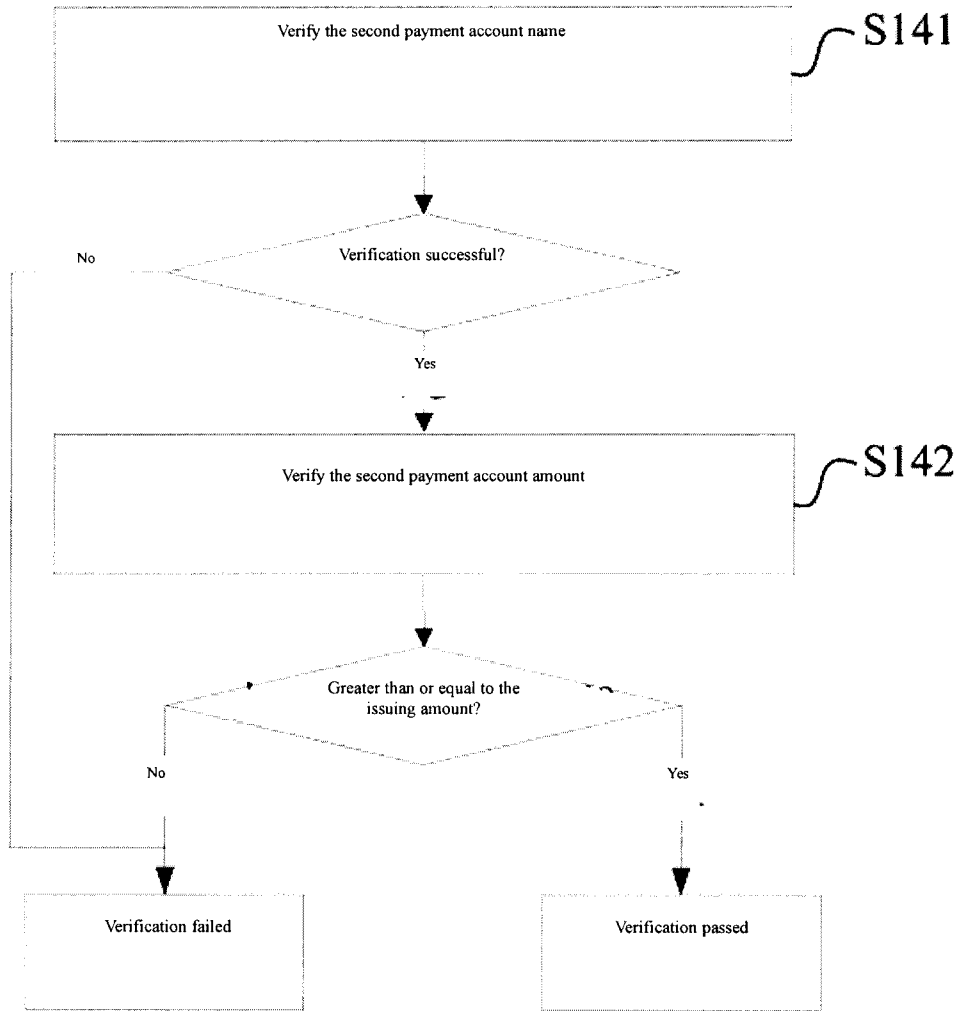


Figure 3

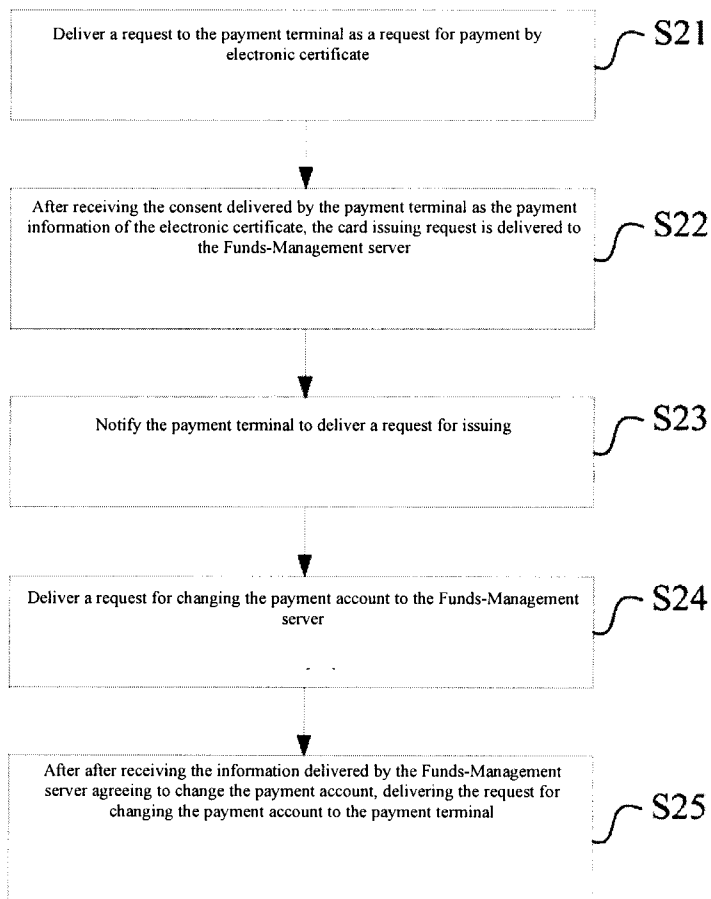


Figure 4

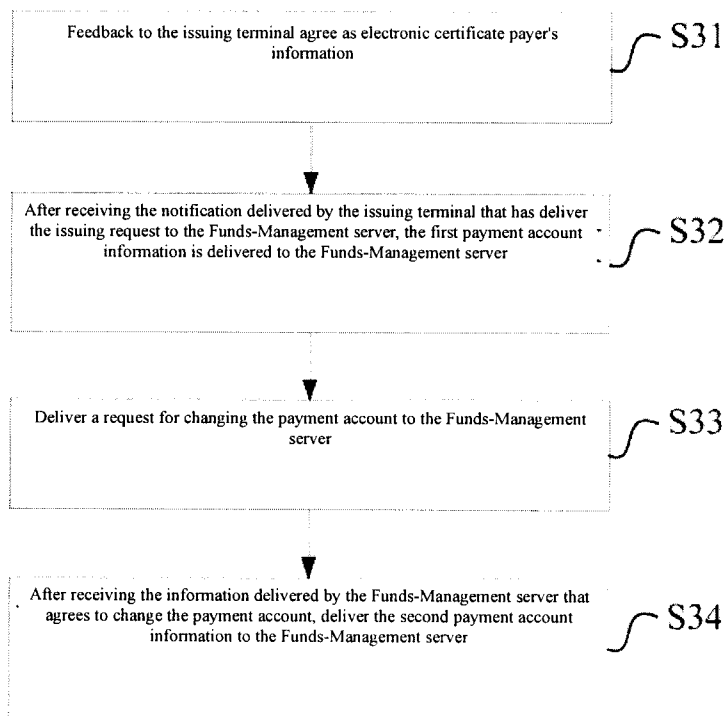


Figure 5

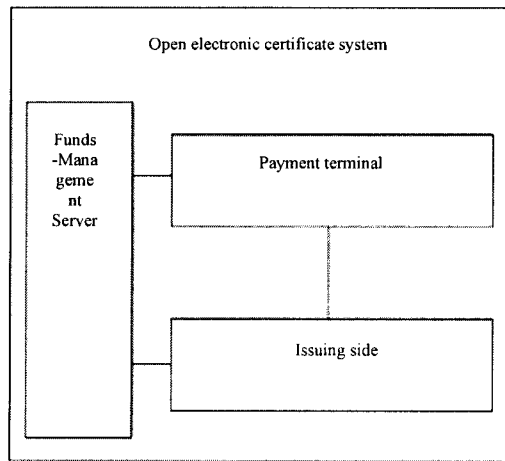


Figure 6

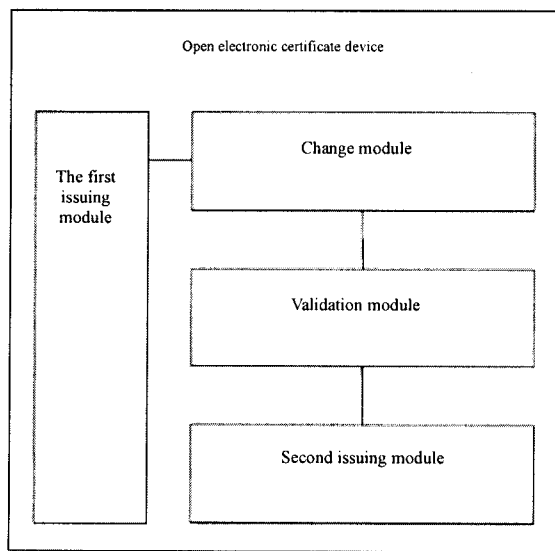


Figure 7

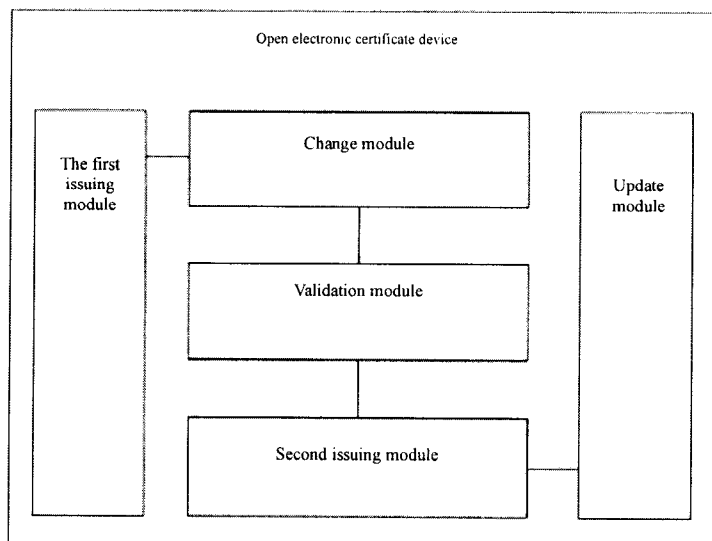


Figure 8

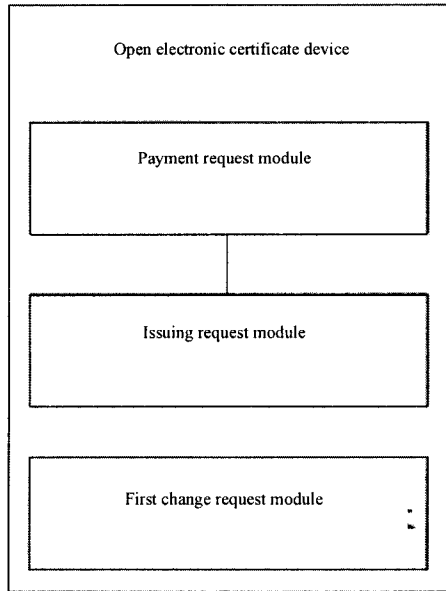


Figure 9

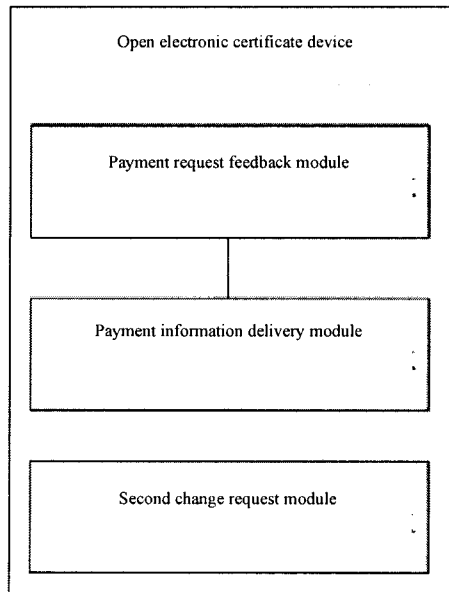


Figure 10

