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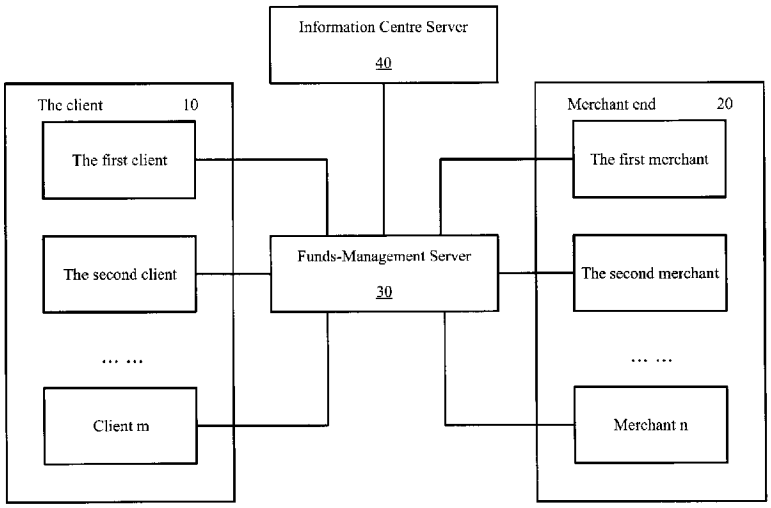
(54) Titre : SYSTEME DE PAIEMENT BASE SUR UN SERVEUR PARTAGE DE GESTION DE FONDS, ET PROCEDE, DISPOSITIF ET SERVEUR ASSOCIES

(54) Title: PAYMENT SYSTEM BASED ON SHARED FUNDS-MANAGEMENT SERVER, AND METHOD, DEVICE AND SERVER THEREFOR



(57) Abrégé/Abstract:
Disclosed are a payment system based on a shared funds-management server, and a method, device and server therefor, belonging to the field of e-commerce. The method comprises: a funds-management server receiving payment request information sent by a client end; comparing the sum of a funds balance and a credit overdraft limit of the client end with a payment amount to determine whether an electronic commitment payment certificate can be created; if yes, the funds-management server respectively freezing the funds balance and the credit overdraft limit within a client end account, the funds balance and the credit overdraft limit corresponding to the payment amount; generating the electronic commitment payment certificate for the funds- management server to commit to pay funds according to an agreed condition, and sending the electronic commitment payment certificate to a merchant end to make a credit commitment payment on behalf of the client end, and synchronising to an information centre server. Using the technical solution of the present invention to supervise both parties in a transaction reduces financial risk, and ensures the interests of both parties in the transaction.

Abstract

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PAYMENT SYSTEM BASED ON SHARED FUNDS-MANAGEMENT SERVER, AND METHOD, DEVICE AND SERVER THEREFOR

[1] [Technical Field]

[2] This invention refers to e-commerce field, especially, it is the same Funds-Management server payment system and its payment method, device and server.

[3] [Background Technology]

[4] E-commerce has become increasingly widely used in a variety of commercial trade activities, the so-called e-commerce is a business operation model that based on the browser and server applications helps consumer realize online shopping, online transactions between merchants and online electronic payments, as well as a variety of business activities, trading activities, financial activities and related integrated service activities in the commercial trade, and in the Internet open network environment.

[5] At present, many banks or enterprises have provided a network of payment services, allowing customers to operate computers, mobile phones and other terminal equipment to achieve network payment, the way of the network payment provides customers with a great convenience. But in the process of network payment, the payment is conducted by directly using the existing funds in the debit cards or credit card, or allocating the credit limit of the existing funds or credit card to the third party as a guarantee for the transaction, once the merchant does not provide goods or service, or disputes occur, the financial security is difficult to be guaranteed. Thus, the need for new payment systems, methods, devices and servers at this stage to reduce the risk of user funds and to protect the interests of buyers and sellers.

[6] [Summary of the invention]

[7] In view of the above, the technical problem to be solved by the present invention is to provide a payment system, and its payment method, device and server based on the same Funds-Management server to reduce the risk of user funds, and to protect the interests of buyers and sellers.

[8] The technical solution of the present invention to solve the above-mentioned technical problems is as follows:

[9] A payment system based on the same Funds-Management server, comprising at least

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one client, at least one merchant, an information centre server and a Funds-Management server, connected with the client, the merchant and the information centre server connection respectively, where:

[10] The above-mentioned client is to send payment request information including at least a payment amount to the Funds-Management server;

[11] The merchant is used for receiving an electronic commitment payment certificate sent by the Funds-Management server;

[12] The Funds-Management server is used for receiving payment request information sent by the client; comparing the sum of the request information of the client funds balance and the credit overdraft limit with the payment amount to determine whether an electronic commitment payment certificate can be created ; if possible, the Funds-Management server will freeze the funds balance and credit overdraft limit within the said client and account, making the freezing funds exceeds or equals to the payment amount ; generating the electronic commitment payment certificate of the Funds-Management server to commit to pay funds according to the agreed condition, and sending the electronic commitment payment certificate to the merchant to make a credit commitment payment on behalf of the client and synchronize the electronic commitment payment certificate information to the information centre server.

[13] The information centre server for storing and supervising the electronic commitment payment certificate information.

[14] According to another aspect of this invention, there is a network payment method based on the same fund servers, and the method is comprised by following steps:

[15] The Funds-Management server receives the payment request information sent by the client, wherein the payment request information includes at least the payment amount;

[16] Comparing the sum of the fund balance and the credit overdraft limit to determine whether an electronic commitment payment certificate can be generated to make a credit commitment payment;

[17] if possible, the second Funds-Management server will freeze the funds balance and credit overdraft limit within the said client and account, making the freezing funds exceeds or equals to the payment amount; generating the electronic commitment payment certificate of the second Funds-Management server to commit to pay funds

according to the agreed condition, and sending the electronic commitment payment certificate to the Merchant to make a credit commitment payment on behalf of the client

[18] According to another aspect of the present invention, there is provided a payment device based on the same Funds-Management server, the device comprises a receiving module, a judging module and a processing module.

[19] The receiving module is configured to receive payment request information transmitted by the client, and the payment request information includes the payment amount;

[20] A judgement module configured to compare the sum of the client fund balance and the credit overdraft amount and the payment amount to determine whether or not an electronic commitment payment document can be issued;

[21] A processing module configured to freeze the balance of funds and the amount of credit overdrafts in the client account when the payment is allowed so that the total amount of the freezing is greater than or equal to the payment amount; generating an electronic commitment payment voucher, Commitment to send voucher information to the merchant.

[22] A server based on the fund server, said server comprising a payment device according to any one of above claim.

[23] The present invention provides a payment system based on the same Funds-Management server and its method, device and server, supervises the information of the buyers and sellers through the Funds-Management server and the information centre server, and the regulatory function is merged into the bank or other institutions with payment ability; meanwhile, freezes the client account funds balance, generates electronic payment certificates and synchronize the information centre server for real-time monitoring, reduces the risk of funds to protect the interests of the buyers and the sellers; this program makes full use of the risk control centre function of the credit centre of the Funds-Management server and the information centre server, facilitates the security of on-line transactions and guarantees transaction funds with a more optimized credit mechanism, provides credit media for both parties to the transaction, and reduces the risk of funds through the supervision of funds to protect the interests of both parties. In addition, it brings convenience to the customer by adding loan functions, which also enriches businesses of banks or other institutions with credit payment ability.

[24] [Brief Description]

[25] Figure 1 is a schematic diagram of the payment system based on the same Funds-Management server provided by Example 1 of the present invention;

[26] Figure 2 is a flow chart of the payment method based on the same fund server provided by Example 2 of the present invention;

[27] Figure 3 is a flow chart of the payment method based on the same fund server provided by Example 3 of the present invention;

[28] Figure 4 is a flow chart of the payment method based on the same fund server provided by Example 4 of the present invention;

[29] Figure 5 is a block diagram of a payment device based on the same Funds-Management server provided by Example 5 of the present invention;

[30] Figure 6 is a block diagram of a payment system based on the same Funds-Management server provided in the Example 6 of the present invention.

[31] [Description of the Preferred Examples]

[32] The present invention will be described in further detail with reference to the accompanying drawings and the accompanying example, in which the technical problems, technical solutions and advantages to be solved by the present invention will become more apparent. It is to be understood that the specific examples described herein are merely illustrative of the invention and are not intended to limit the invention.

[33] Example 1

[34] As shown in Figure 1, an example of the present invention provides a payment system based on the same Funds-Management server, which includes at least one client 10, at least one merchant 20, an information centre server 40, and a Funds-Management server 30, the Funds-Management server 30 is connected to the client 10, the merchant 20 and the information centre server 40, respectively,

[35] The client 10, connected with the fund management server 30, is configured to transmit the payment request information to the Funds-Management server 30, wherein the payment request information includes the payment amount.

[36] Specifically, the client 10 is suitable for the payer (buyer), including the account information of mobile phone, personal computer, PAD, and other intelligent devices, the account information of the client 10 is filled in when the customer registers and stored

in the database of the Fund-Management service and (or) the information centre server, the account information of the client 10 includes customer ID, an account opening bank, account name, a bank account number, and a credit balance, and may also include the customer's shipping address. The payment request information is information such as the written and confirmed price (payment amount), the receipt address and the like after the customer purchases the specific goods / services. According to the pre-set rules, price of the goods/services, and commercial Merchants of the goods/services, the client 10 generates data package; the packet will be transmitted to the Funds-Management server 30. The payment request information includes at least the payment amount, and may include the merchant information and the merchandise information. Among them, the merchant information can be directly merchants' receiving account number, you can also uniquely identify the merchant information (such as merchant ID), and find the corresponding bank account information by Funds-Management server 30 based on the unique identification of the merchant from the database. In the specific application, the account information of the merchant 20 should be kept confidential with respect to the client 10, so the merchant information is preferably the merchant ID, and the Funds-Management server 30 inquires the merchant's receiving account by using the correspondence relationship between the merchant ID and its receiving account. In other words, the client 10 only needs to inform the Funds-Management server 30 which merchant's which goods need to be paid how much money, then the Funds-Management server 30 will be able to call out the merchant account to implement the appropriate payment operation.

[37] The merchant 20 is connected to the Funds-Management server 30 for receiving the electronic commitment payment certificate sent by the Funds-Management server 30.

[38] Specifically, the merchant 20 is applied to the receiving party (seller), and the merchant includes but not limited to devices such as servers, POS machines and other devices. Merchants include but not limited to manufacturers, agents, logistics companies, etc. The merchant information is also registered in the database of the Funds-Management server and (or) the information centre server, and the merchant information includes, but not limited to merchant ID, merchant name, merchant opening bank, merchant account name, and merchant bank account number. The Merchant 20 receives the electronic

commitment payment voucher transmitted from the second Funds-Management server 30, and extracts the merchandise information and the goods receipt information in the electronic commitment payment voucher information to designate the merchandise transmission destination.

[39] The Funds-Management server 30 receiving payment request information sent by a client 10; comparing the sum of a funds balance and a credit overdraft limit of the client 10 with a payment amount to determine whether an electronic commitment payment certificate can be created; if possible, the Funds-Management server respectively freezing the funds balance and the credit overdraft limit within a client and account, the funds balance and the credit overdraft limit corresponding to the payment amount; generating the electronic commitment payment certificate for the Funds-Management server to commit to pay funds according to an agreed condition, and sending the electronic commitment payment certificate to a merchant 20 to make a credit commitment payment on behalf of the client and synchronize to the information centre server 40 .

[40] Specifically, the Funds-Management server 30 receives the packet of the payment request information and parses it according to the pre-set rule to obtain the relevant payment information including, but not limited to, the merchant information, the merchandise information, and the payment amount, and the like information, which merchant to which the goods to pay the amount of money. The second Funds-Management server 30 inquires whether the balance of the bank funds and the credit overdraft amount of the client account is sufficient for the current settlement, and if it is insufficient, the payment is terminated and, if sufficient, the balance of the payment amount and the amount of credit overdraft, So that the total amount of the freeze is greater than or equal to the amount of the payment, until the merchant confirms the delivery or the customer confirms the receipt after the transfer operation.

[41] It is understandable that the amount of funds to be frozen and the corresponding amount of credit overdrafts are included in the following cases:

[42] First, only the balance of the funds in the client account is frozen so that the total amount of the freeze is greater than or equal to the amount paid.

[43] Second, only to freeze the amount of credit overdraft, so that the total amount of frozen

greater than or equal to the amount of the payment.

[44] Third, respectively, part of the client account to freeze the balance of funds and credit overdraft limit, so that the total amount of frozen greater than or equal to the amount of the payment.

[45] The information centre server 40 is connected to the Funds-Management server 30 for storing the electronic commitment payment certificate information of the client 10 and the merchant 20.

[46] Specifically, both the client 10 and the merchant 20 can obtain the electronic commitment payment certificate information to the information centre server 40 via the Internet for subsequent processing, such as the correctness of the dual channel authentication information using the data. Specifically, the second Funds-Management server 30 may further determine whether or not the payment operation is made in accordance with the state of the electronic commitment to pay the certificate information, that is, the payment of the balance of the funds and the amount of the credit overdraft, credit limit.

[47] In the present example, the same Funds-Management server 30 may be connected to the plurality of client 10 and the plurality of merchant 20 through the Internet at the same time. That is, the server where the client 20 account is located and the server where the client 10 resides are the same Funds-Management server 30. The Funds-Management server 30 can be a single or multiple servers in a physical sense, e.g., they can work in parallel, and the resources of the server are automatically allocated to realize the Fund-Management according to the different traffic. The Funds-Management server includes but not limited to servers in organizations such as banks, and businesses. In practical applications, it can be seen as the same bank's cluster Funds-Management server, but it not limited to banks, it also supports the flow of funds in other institutions in the Internet or other institutions with payment ability, that is the so called the third party institution. Through the Funds-Management server and information centre server, the seller and seller of information are regulated, and the regulatory functions are merged into the bank or other institutions with credit ability to pay.

[48] Example 2

[49] As shown in Figure 2, an example of the present invention provides a payment method

based on the same fund server for use in the Funds-Management server, which method comprises the steps of:

[50] The S201 and the Funds-Management server receives the payment request information sent by the client, wherein the payment request information includes at least the payment amount;

[51] Specifically, the payment request information received by the Funds-Management server includes merchant information, product information and payment amount, and may include client information (e.g., customer ID). Among them, the merchant information can be directly merchants receiving account number, you can also uniquely identify the merchant information (such as business ID), and find the corresponding bank account information by Funds-Management server based on the unique identification of the merchant from the database. In the specific application, the account information of the merchant should be kept confidential with respect to the client, so the merchant information is preferably the merchant ID, and the Funds-Management server inquires the merchant's receiving account by using the correspondence relationship between the merchant ID and its receiving account. In other words, the client only need to inform the Funds-Management server to which merchant and which goods to pay the amount of funds, the Funds-Management server will be able to call out the account of the implementation of the corresponding payment operation. [52] S202, the client's balance of funds and credit overdraft and the sum of the amount of payment to determine whether to generate electronic commitment to pay the certificate to be paid, if allowed, then enter the payment process, or terminate the payment. It is to be understood that in the present embodiment, the balance of funds is usually stored in a debit card, which is preferably a credit card usage amount, or other credit financial products

[53] This Step further includes: the Funds-Management server from the database query client account balance; determine whether the balance of funds is greater than or equal to the amount of payment, if so, then allow the payment; otherwise terminate the payment. Wherein the bank account of the client can be informed to the Funds-Management server by the client in the payment request, or can be queried from the database according to the client ID by the Funds-Management server. Only when the sum of the

client's funds balance and credit overdraft limit are greater than or equal to the payment amount, it means that customers have the ability to pay and in this time it can be allowed to have payment behaviour. So, it can save the payment cycle, protect the interests of businesses.

[54] S203, the Funds-Management server will freeze the balance of funds and credit overdraft limit within the client terminal account, so that the total amount of frozen greater than or equal to the amount of the payment.

[55] This Step only to freeze the payment amount or credit limit to ensure that there is sufficient funds to complete the transaction, but not directly transfer to the merchant account, so to ensure the interests of the buyers and the sellers, followed by the client, the merchant or logistics company to send the payment information to confirm the delivery is completed by the Funds-Management server to receive the payment of information, the re-blocked funds will be allocated to the merchant account.

[56] The S204, the Funds-Management server generates an electronic commitment payment the certificate;

[57] Specifically, since the payment request information is sent by the buyer to the Funds-Management server through the client operation, the payment information is objectively confirmed by the customer and authorized by the bank. The Funds-Management server respectively freezes the corresponding balance of funds and the amount of credit overdraft limit, and generates an electronic commitment payment certificate based on the payment information. The electronic commitment payment certificate information includes but is not limited to commodity information, payment amount (frozen funds or credit overdraft limit or credit loan limit), delivery address and validity period, the form is not limited to text, pictures, graphics and so on. The electronic certificate is the certificate of the receiving end of the merchant, and the merchant provides the corresponding goods / service according to the electronic commitment payment certificate.

[58] S205, the electronic commitment payment certificate issued to the client for the client to undertake credit commitments and synchronization to the information centre server.

[59] Specifically, this Step sends the generated electronic certificate information to the information centre server so that the information centre server performs subsequent

tracking.

[60] The payment method illustrated by the example of the present invention can reduce the risk of funds and protect the interests of the buyers and the sellers through the Funds-Management server receiving the payment request information of the client, determining whether or not the payment is permitted based on the credit overdraft limit, funds amount, or credit loan limit in the client account, then at the same time freezing the payment account in the client, and generating electronic commitment payment certificate.

[61] Example 3

[62] As shown in Figure 3, an example of the present invention provides a payment method of the funds credit loan limit, applied in the same Funds-Management servers as shown in Figure 1, which is comprised of the steps as follows:

[63] S301, the client sends the payment request information to the Funds-Management server, the payment request information includes the payment amount, and the Funds-Management server receives the payment request information sent by the client.

[64] And the payment request information is composed of a plurality of data packets, including at least the Merchant information, the product information and the payment amount. You can also include client information (such as client ID). Among them, the merchant information can be directly merchants receiving account number, you can also uniquely identify the merchant information (such as business ID), and find the corresponding bank account information by Funds-Management server based on the unique identification of the merchant from the database. In the specific application, the account information of the merchant should be kept confidential with respect to the client, so the merchant information is preferably the merchant ID, and the Funds-Management server inquires the merchant's receiving account by using the correspondence relationship between the merchant ID and its receiving account. In other words, the client only need to inform the Funds-Management server to which merchant and which goods to pay the amount of funds, the Funds-Management server will be able to call out the account of the implementation of the corresponding payment operation.

[65] The way the client sends payment request information to the Funds-Management server can be done in the existing way, such as using a digital signature or a digital envelope. A

digital signature is a data that the user encrypts a hash of the original data with his own private key. The information recipient obtains the hash digest by decrypting the digital signature attached to the original information using the public key of the sender of the information and confirms whether the original information is made by comparing with the hash digest generated by the original data received by the information recipient Tampered with. This ensures that the data transmission is undeniable. Digital envelopes use password technology to ensure that only the recipient of the specified information can read the contents of the information. Digital envelopes used in a single-key password system and public key password system. The information sender first encrypts the information with the randomly generated symmetric password, and then encrypts the symmetric password with the public key of the receiver. The symmetric password encrypted by the public key is called the digital envelope. In the transmission of information, the information receiver shall decrypt the information, you must first use their own private key to decrypt the digital envelope, get a symmetric password, in order to use the symmetric password to decrypt the information obtained. This ensures the authenticity and integrity of the data transmission.

[66] S302, inquiring the sum of the funds balance of the client account and the amount of the credit overdraft, comparing the sum of the funds balance and the amount of the credit overdraft with the payment amount, if the sum is greater than or equal to the amount, it is sufficient; if the sum is less than the amount, it is insufficient. When the funds balance and credit overdraft limit is sufficient, executing the Step S204, otherwise terminating, not to pay;

[67] S303, the second Funds-Management server to freeze the client account within the amount of payment corresponding to the balance of funds and credit overdraft capacity; understand that the amount of the corresponding payment of the corresponding amount of funds balance and credit overdraft capacity, including the following circumstances :

[68] 1. Only the balance of the funds in the client account is frozen so that the total amount of the frozen is greater than or equal to the payment amount.

[69] 2. Only to freeze the amount of credit overdraft limit, so that the total amount of frozen are greater than or equal to the amount of the payment.

[70] 3. Respectively, some of the client's account to freeze the balance of funds and credit

overdraft limit, making the total amount of frozen greater than or equal to the amount of the payment.

[71] S304, the Funds-Management server generates an electronic commitment payment the certificate;

[72] S305, sending the electronic commitment payment certificate information to the merchant and the information centre server;

[73] S306, the merchant sends the receiving and receiving information to the Funds-Management server;

[74] It is to be noted that in Step S210, the merchant sends and receives the payment information to the Funds-Management server as an example. In practice, it is also possible for the client, the logistics server, or other entity that can know the delivery status to send the payment information to the Funds-Management server.

[75] S307, the Funds-Management server synchronizes the payment information to the information centre server.

[76] Specifically, the Funds-Management server synchronizes the updated electronic commitment payment certificate information to the information centre server, from the updated electronic commitment payment certificate information to immediately inform the merchandise of the circulation state, when the goods / service delivery is completed, Of the funds to the merchant account.

[77] S308, the funds corresponding to the freezing amount are allocated to the account number of the merchant. It can be understood that, according to the different method of freezing in S303, there will be a matching allocation plan, which will allocate the corresponding funds to the account of the merchant.

[78] S309, end the process.

[79] The payment method and server provided by the example of the present invention receives the payment request information of the client, determines whether the payment is permitted based on the sum of the funds balance and the credit overdraft limit of the client account, and by freezing the funds balance and the credit overdraft limit of the client account to generate electronic commitment payment certificate to supervise in real-time, which can reduce the risk of funds and protect the interests of the buyers and the sellers.

[80] Example 4

[81] As shown in Figure 4, an example of the present invention provides a payment method of the credit overdraft limit, and applied in the payment system of the same management server as shown in Figure 1, which method comprises the steps of:

[82] S401, the Funds-Management server receives the payment request information sent by the client.

[83] And the payment request information is composed of a plurality of data packets, including at least the Merchant information, the product information and the payment amount. You can also include client information (such as client ID). Among them, the merchant information can be directly merchants receiving account number, you can also uniquely identify the merchant information (such as business ID), and find the corresponding bank account information by Funds-Management server based on the unique identification of the merchant from the database. In the specific application, the account information of the merchant should be kept confidential with respect to the client, so the merchant information is preferably the merchant ID, and the Funds-Management server inquires the merchant's receiving account by using the correspondence relationship between the merchant ID and its receiving account. In other words, the client only need to inform the Funds-Management server to which merchant and which goods to pay the amount of funds, the Funds-Management server will be able to call out the account of the implementation of the corresponding payment operation.

[84] The way the client sends payment request information to the Funds-Management server can be done in the existing way, such as using a digital signature or a digital envelope. A digital signature is a data that the user encrypts a hash of the original data with his own private key. The information recipient obtains the hash digest by decrypting the digital signature attached to the original information using the public key of the sender of the information and confirms whether the original information is made by comparing with the hash digest generated by the original data received by the information recipient Tampered with. This ensures that the data transmission is undeniable. Digital envelopes use password technology to ensure that only the recipient of the specified information can read the contents of the information. Digital envelopes used in a single-key password system and public key password system. The information sender first encrypts

the information with the randomly generated symmetric password, and then encrypts the symmetric password with the public key of the receiver. The symmetric password encrypted by the public key is called the digital envelope. In the transmission of information, the information receiver shall decrypt the information, you must first use their own private key to decrypt the digital envelope, get a symmetric password, in order to use the symmetric password to decrypt the information obtained. This ensures the authenticity and integrity of the data transmission.

[85] S402, inquiring the sum of the funds balance of the client account and the amount of the credit overdraft, comparing the sum of the funds balance and the amount of the credit overdraft with the payment amount, if the sum is greater than or equal to the amount, it is sufficient; if the sum is less than the amount, it is insufficient. When the balance of funds and credit overdraft is sufficient, executing Step S403 or executing Step S404;

[86] S403, the second Funds-Management server to freeze the client account within the balance of funds and credit overdraft limit and credit loan limit, so that the total amount of frozen are greater than or equal to the amount of the payment, it can be specifically divided into the following forms:

[87] 1. Only the balance of the funds in the client account is frozen so that the total amount of the frozen is greater than or equal to the payment amount.

[88] 2. Only the credit loan limit is frozen so that the total amount of the greater than or equal to the payment amount.

[89] 3. Only to freeze the amount of credit overdraft limit, so that the total amount of frozen are greater than or equal to the amount of the payment.

[90] 4. Respectively, some of the client's account to freeze the balance of funds and credit loan limit, making the total amount of frozen greater than or equal to the amount of the payment.

[91] 5. Respectively, some of the client's account to freeze the balance of funds and credit loan limit, making the total amount of frozen greater than or equal to the amount of the payment.

[92] 6. Respectively, some of the client's account to freeze the credit loan limit and credit overdraft limit, making the total amount of frozen greater than or equal to the amount of the payment.

[93] 7. Respectively, some of the client's account to freeze the credit loan limit and credit overdraft limit, as well as the funds balance, making the total amount of frozen greater than or equal to the amount of the payment.

[94] S404 asks the client whether to issue credit loan limit; if it is needed, executing Step S405, otherwise turn to Step S411;

[95] S405, judging whether the credit loan limit is sufficient; the sufficient can be understood in several cases:

[96] 1. If the sum of the original funds balance of the client account and the amount of the credit overdraft limit as well as the credit loan limit are greater than or equal to the amount of the payment amount, the credit loan limit is considered to be sufficient; and conversely, it is insufficient;

[97] 2. When the credit loan limit is greater than or equal to the amount of the payment amount, the credit loan limit is considered to be sufficient and, conversely, insufficient.

[98] Specifically, the credit loan limit can be the amount specified by the client, or it can default to the amount of the current payment. For example, when the price of a product selected by the customer is 1,500 Yuan (payment amount), if the customer account funds balance and credit overdraft limit only 900 Yuan, you need credit loan limit of 600 Yuan in order to meet the allowable payment to pay the act. Of course, the using of another way, such as the direct application for credit loan limit of 1,500 Yuan, to pay, is also feasible.

[99] S406, the Funds-Management server to freeze the client account within the balance of funds and credit overdraft limit and credit loan limit, so that the total amount of frozen are greater than or equal to the amount of the payment, it will generate the electronic commitment payment certificate;

[100] S407, sending the electronic commitment payment certificate information to the merchant and the information centre server;

[101] S408, the merchant sends the receiving and receiving information to the Funds-Management server;

[102] It is to be noted that in Step S408, the merchant sends and receives the payment information to the Funds-Management server as an example. In practice, it is also possible for the client, the logistics server, or other entity that can know the delivery

status to send the payment information to the Funds-Management server.

[103] S409, the Funds-Management server synchronizes the payment information to the information centre server.

[104] Specifically, the Funds-Management server synchronizes the updated electronic commitment payment certificate information to the information centre server, from the updated electronic commitment payment certificate information to immediately inform the merchandise of the circulation state, when the goods / service delivery is completed, Of the funds to the merchant account.

[105] S410, the funds corresponding to the freezing amount are allocated to the account number of the merchant. It can be understood that, according to the different ways of freezing in S403, there will be a matching allocation plan, which will allocate the corresponding funds to the account of the merchant.

[106] S411, end the process.

[107] The example of the present invention, on the basis of the Example 3, not only facilitates the buyer, but also greatly enriches the business of the bank or other institution with the credit payment ability by increasing the credit loan limit function; Keeping Buyers and sellers' electronic commitment certificate to track synchronization, the flow of goods and the flow of funds trajectory can be effective combined to protect the interests of both buyers and sellers effectively.

[108] Example 5

[109] As shown in Figure 5, an example of the present invention provides a payment device including a receiving module 301, a judgement module 302, and a processing module 303, wherein:

[110] The receiving module 301 is configured to receive payment request information transmitted by the client, and the payment request information includes the payment amount.

[111] Specifically, the payment request information received by the receiving module 301 includes merchant information, product information and payment amount, and may include client information (for an example, customer ID). Among them, the merchant information can be merchants receiving account, and the merchant information can also be uniquely identified (such as business ID). In the particular application, the account

information of the merchant should be kept confidential from the client, so the merchant information should be the merchant ID, that is, the client simply informs which merchandise of which merchant is paid by how much, then the device call out of the merchant account number to implement the corresponding payment operation.

[112] The judgement module 302 is configured to determine whether to pay based on the client' account fund balance and the credit overdraft limit as well as the payment amount.

[113] As a preferred scheme, the judgement module 302 is specifically configured to inquiry the client's account funds balance and the credit overdraft limit; and determined whether the funds balance and the credit overdraft limit of the client account are greater than or equal to the payment amount, if possible, it is allowed to pay. In this way, firstly to determine the payment ability of the sum of the funds balance and the credit overdraft limit, and priority to the use of account' funds balance and credit overdraft limit payment method, which can save the payment cycle to protect the interests of businesses. And the bank account or the credit card account may be notified by the client to the device in the payment request information, or the device may inquire from the database based on the client information and obtain the funds corresponding to the account funds balance or credit overdraft limit. Only when the sum of the client's funds balance and credit overdraft limit are greater than or equal to the payment amount, it means that customers have the ability to pay and in this time it can be allowed to have payment behaviour.

[114] As another preferred example, the judgement module 302 is also configured to ask the client whether credit loan limit is to be issued when the sum of the fund balance and the credit overdraft limit of the client account is less than the payment amount; if it needs credit loan limit, then the client account to issue credit loan limit and allow the payment; if not, then terminate the payment. In addition, it not only to facilitate the buyer, but also greatly enrich the bank or other institutions with credit ability to pay the business. When using a Funds-Management server to obtain a bank account or credit card account based on customer information, a customer may have multiple accounts, and a mixed payment method may also be used. For example, when the price of a commodity selected by the customer is 1,500 Yuan (the payment amount), the sum of the funds balance and the

credit overdraft limit is only 900 Yuan, then the amount of money that the customer can use to pay is a total of 900 Yuan, which will not be able to pay; If the client account has credit loan limit amount of 600 Yuan, so the application of credit loan limit is 600 Yuan, then they have a 1,500 Yuan of using, can be implemented to be the payment behaviour.

[115] The processing module 303 is configured to freeze the funds balance and the credit loan limit and the credit loan limit in the client account respectively when the payment is allowed so that the total amount of the freezing are greater than or equal to the payment amount; generating the electronic commitment payment certificate, the electronic commitment payment certificate message is sent to the merchant.

[116] Preferably, the processing module 303 further includes a freeze unit 5031, a credential generation unit 5032, and a synchronization unit 3033, wherein:

[117] The freezing unit 3031 is configured to freeze the balance of the funds and the credit overdraft limit and the credit loan limit in the client account when the payment is allowed so that the total amount of the freezing are greater than or equal to the payment amount;

[118] The certificate generation unit 3032 is configured to generate an electronic commitment payment document;

[119] The synchronization unit 3033 is configured to transmit the electronic commitment payment certificate information to the merchant.

[120] In addition, the processing module 303 may include a transfer unit, configured to receive the payment information, synchronize the payment information to the information centre server, and allocate the frozen funds to the account of the merchant.

[121] What needs to be noted is that the technical features of the above-described method Examples 2, 3 and 4 are applicable in the present apparatus, which will not be repeated again here.

[122] In addition, the present invention provides a Funds-Management server including a payment device in the fourth example, which is not repeated here.

[123] The payment method and server provided by the example of the present invention receives the payment request information of the client, determines whether the payment is permitted based on the sum of the funds balance and the credit overdraft limit of the client account, and by freezing the funds balance and the credit overdraft limit of the

client account to generate electronic commitment payment certificate to supervise in real-time, which can reduce the risk of funds and protect the interests of the buyers and the sellers. In addition, by increasing the loan function, not only to facilitate the buyer, but also greatly enrich the bank or other institutions with credit ability to pay the business.

[124] Example 6

[125] As shown in Figure 6, a preferred example of the present invention provides a payment system based on the same Funds-Management server, which includes a client 10, a merchant 20, a Funds-Management server 30, and an information centre server 50, wherein:

[126] The information centre server 50 is used to store and supervise the electronic commitment payment certificate information.

[127] The client 10 includes a payment request module 101 configured to send payment request information to the Funds-Management server 30, wherein the payment request information includes merchant and merchandise information, and payment amount.

[128] The merchant 20 includes a credential receiving module 201 and a credential updating module 202, wherein the certificate receiving module 201 is configured to receive the electronic commitment payment certificate sent by the fund managing server 30.

[129] The Funds-Management server 30 includes a receiving module 301, a judgement module 302, and a processing module 303, wherein:

[130] The receiving module 301 is configured to receive payment request information transmitted by the client;

[131] the judgement module 302 is configured to compare the sum of the client' funds balance and the credit overdraft limit and the payment amount to determine whether the electronic commitment payment document can be issued;

[132] As a preferred example, the judgement module 302 is configured to determine whether the funds balance and the credit overdraft limit of the client account is greater than or equal to the amount of the payment, and if so, the payment is allowed; Greater than or equal to the payment amount, if possible, then allow payment, or to further determine whether the client's account loan amount is greater than or equal to the payment amount, if so, allow to pay.

[133] The processing module 303 is configured to freeze the balance of the funds corresponding to the payment amount in the client account when the payment is allowed, and generate the electronic commitment payment certificate to transmit the electronic commitment payment certificate information to the merchant and synchronize to the information centre server.

[134] As a preferred example, the receiving module 301 of the Funds-Management server 30 is also responsible for receiving the payment information; the processing module 303 also includes a transferring module, which is configured to transfer equal funds to the account of the merchant after receiving the payment information.

[135] Specifically, since the payment request information is sent by the buyer to the Funds-Management server 30 through the client 10, the payment information is objectively obtained by the client 10 confirming and authorizing the bank to pay. The second Funds-Management server 30 respectively freezes the corresponding balance of funds and the amount of credit overdraft limit, and generates an electronic commitment payment certificate based on the payment information. The electronic commitment payment certificate information includes but is not limited to commodity information, payment amount (frozen funds or credit overdraft limit or credit loan limit), delivery address and validity period, the form is not limited to text, pictures, graphics and so on. The electronic certificate is the certificate of the receiving fund of the Merchant 20, and the Merchant 20 provides the corresponding merchandise/service based on the electronic commitment payment certificate.

[136] The general technicians of this field can understand and implement all or parts of steps in the aforesaid examples that can complete the procedure by controlling relevant hardware, and the said procedure can be stored in a readable storage media of a computer such as ROM/RAM, disk and light disk.

[137] The preferred examples of the present invention have been described above with reference to the accompanying drawings, and are not intended to limit the scope of the invention. It will be apparent to those skilled in the art that various modifications, equivalents, and improvements may be made without departing from the scope and spirit of the invention.

Claims:

1. A method of sharing authentication information in a purchasing transaction and transferring possession of one or more goods between parties, the method comprising:

generating an electronic commitment payment certificate by freezing the funds balance and credit overdraft limit within a client account, wherein the freezing funds exceeds or equals to a payment amount;

storing the electronic commitment payment certificate information in an information center server;

authenticating one or more parties to the transaction using a dual channel authentication; and

verifying the status of the authentication by one or more parties to the transaction, wherein the authentication includes whether or not the payment operation is made in accordance with the state of the electronic commitment to pay and wherein state of the electronic commitment certificate includes status of delivery of goods or services.

2. The method of claim 1, wherein one of the parties is a purchaser.

3. The method of claim 1, wherein one of the parties is a vendor.

4. The method of claim 1, wherein one of the parties is a logistics company.

5. The method of claim 1, wherein one of the parties is a third-party institution authorized to collect information regarding the flow of funds.

6. The method of any one of claims 1-5, wherein the dual channel authentication is a two-factor authentication using a second associated communication channel.

Date Reçue/Date Received 2021-06-30

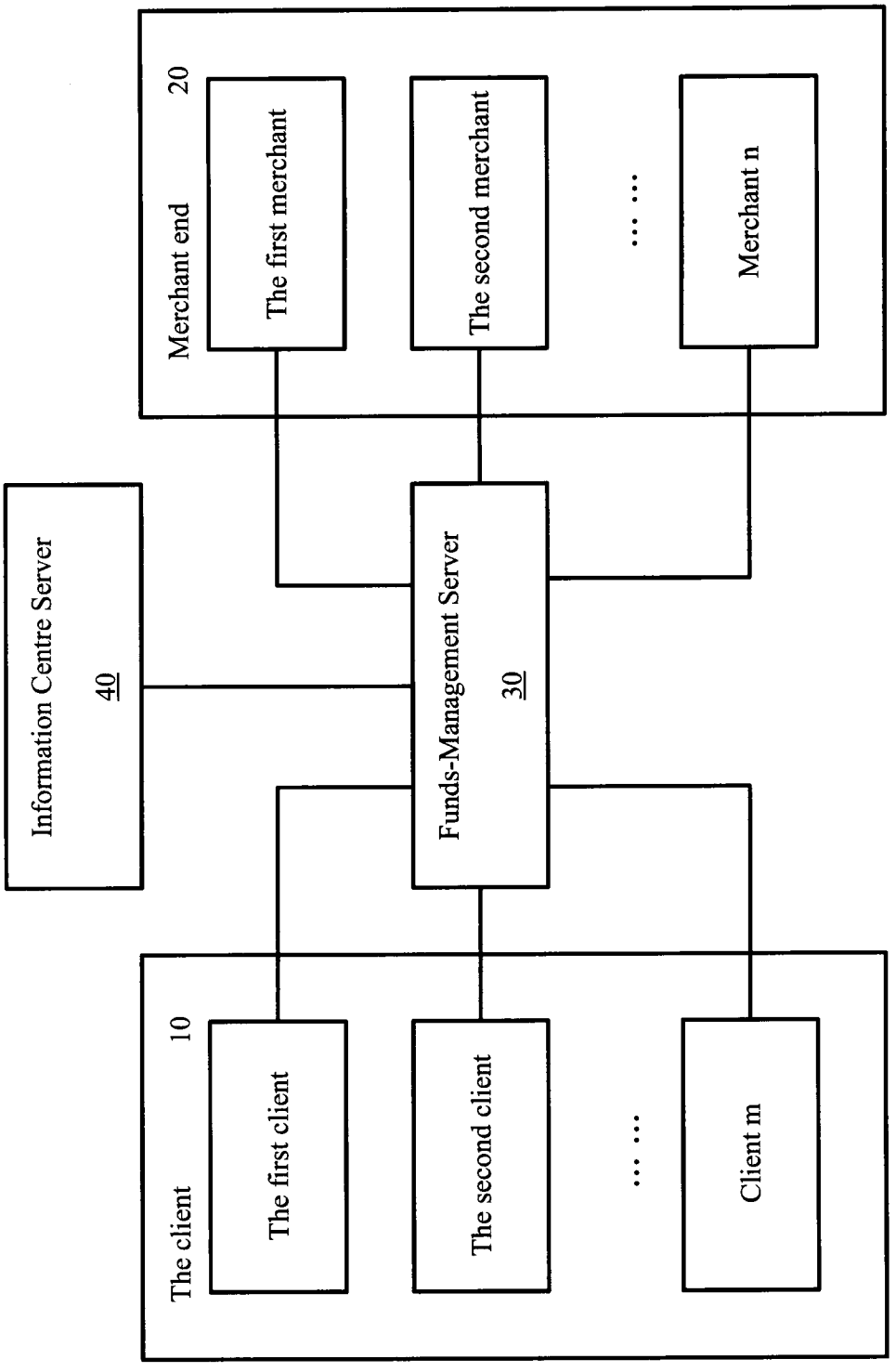

Merchant end 20
The first merchant
The second merchant
... ...
Merchant n
Information Centre Server 40
Funds-Management Server 30
The client 10
The first client
The second client
... ...
Client m

Figure 1

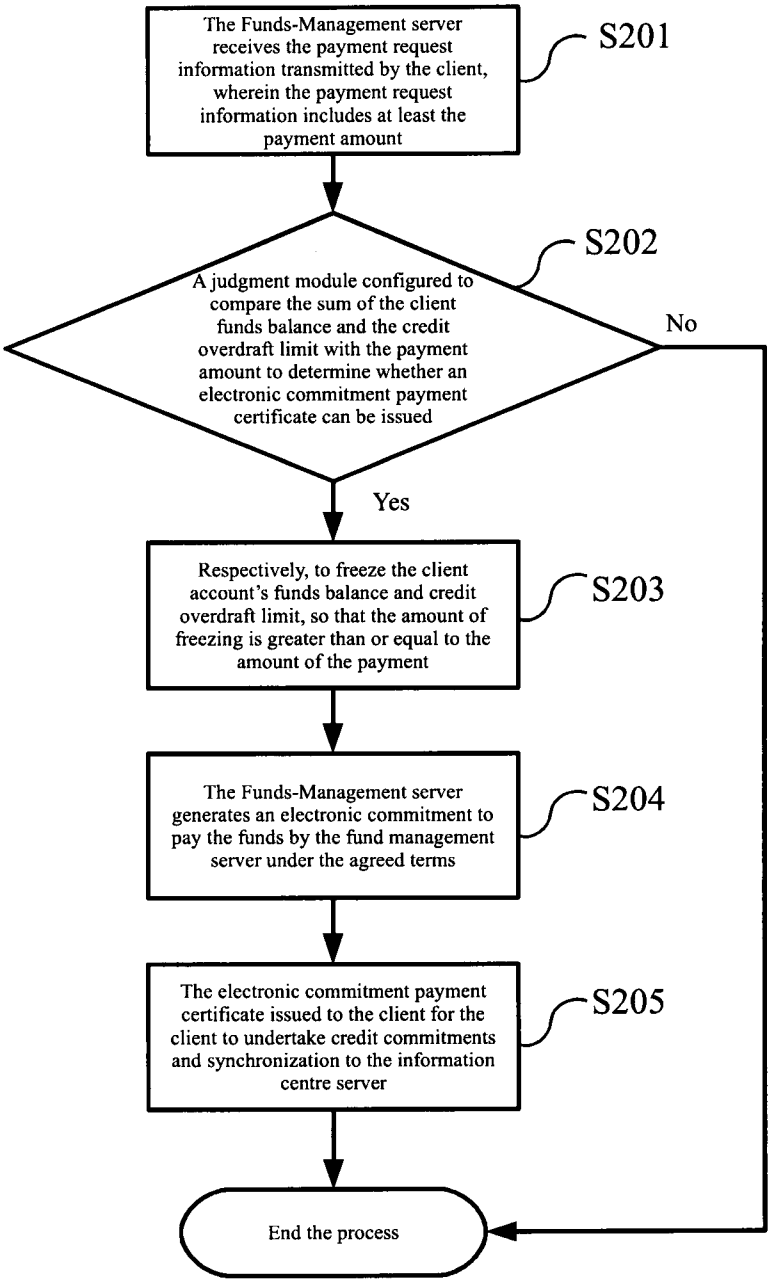

The Funds-Management server receives the payment request information transmitted by the client, wherein the payment request information includes at least the payment amount
S201
A judgment module configured to compare the sum of the client funds balance and the credit overdraft limit with the payment amount to determine whether an electronic commitment payment certificate can be issued
S202
No
Yes
Respectively, to freeze the client account's funds balance and credit overdraft limit, so that the amount of freezing is greater than or equal to the amount of the payment
S203
The Funds-Management server generates an electronic commitment to pay the funds by the fund management server under the agreed terms
S204
The electronic commitment payment certificate issued to the client for the client to undertake credit commitments and synchronization to the information centre server
S205
End the process

Figure 2

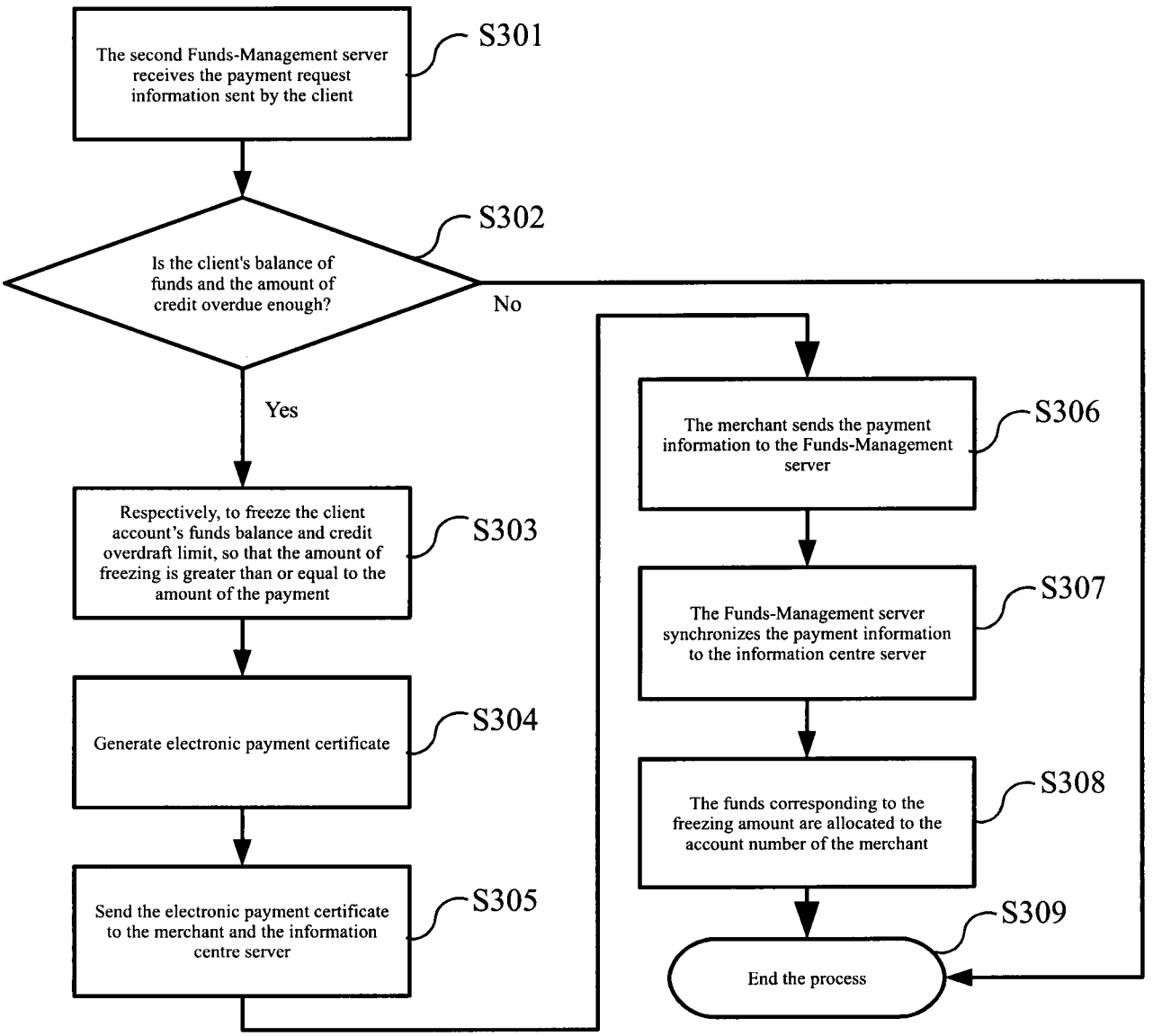

The second Funds-Management server receives the payment request information sent by the client
S301
Is the client's balance of funds and the amount of credit overdue enough?
S302
No
Yes
Respectively, to freeze the client account's funds balance and credit overdraft limit, so that the amount of freezing is greater than or equal to the amount of the payment
S303
Generate electronic payment certificate
S304
Send the electronic payment certificate to the merchant and the information centre server
S305
The merchant sends the payment information to the Funds-Management server
S306
The Funds-Management server synchronizes the payment information to the information centre server
S307
The funds corresponding to the freezing amount are allocated to the account number of the merchant
S308
End the process
S309

Figure 3

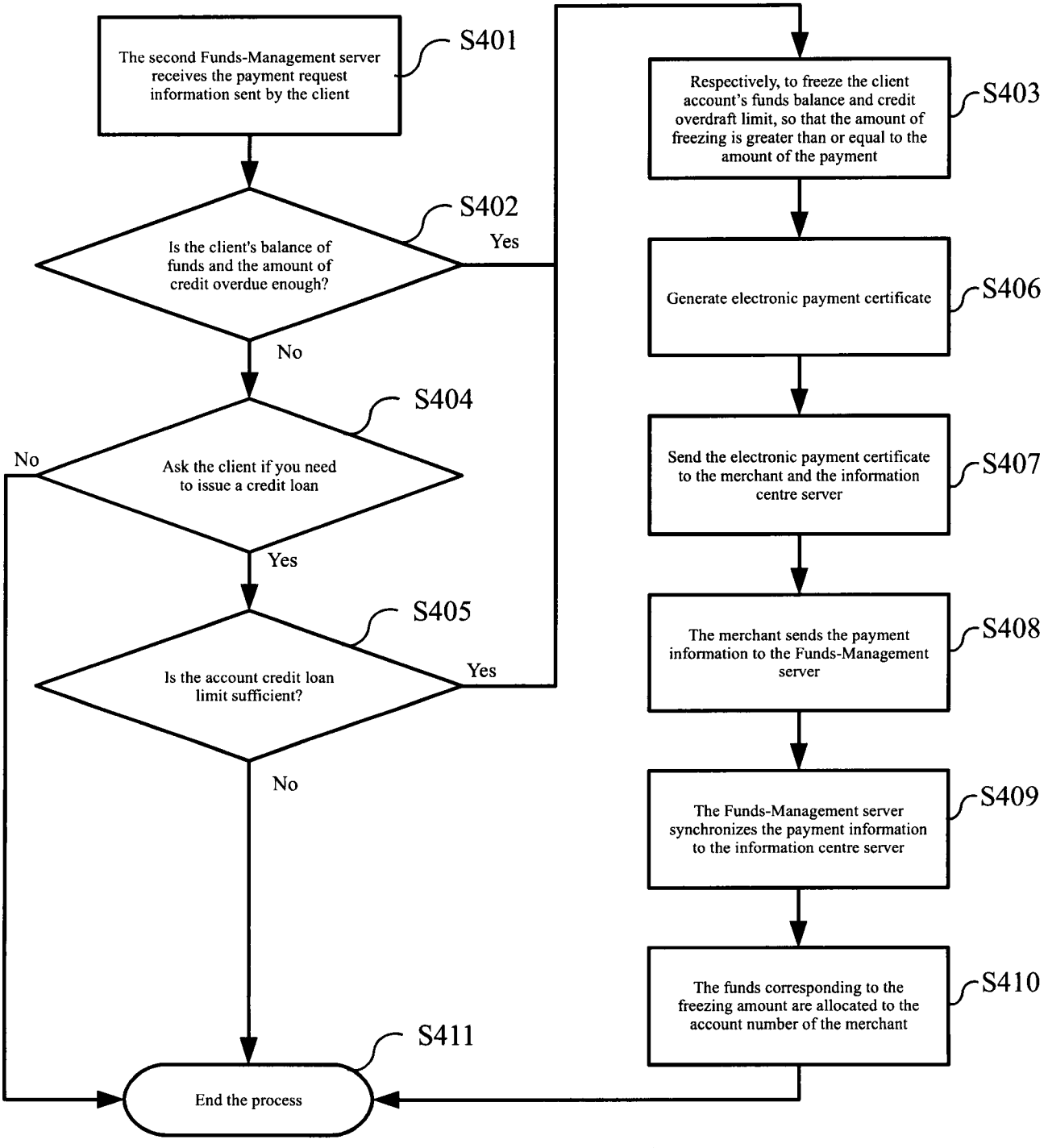

The second Funds-Management server receives the payment request information sent by the client
S401
Is the client's balance of funds and the amount of credit overdue enough?
S402
Yes
No
Ask the client if you need to issue a credit loan
S404
No
Yes
Is the account credit loan limit sufficient?
S405
Yes
No
End the process
S411
Respectively, to freeze the client account's funds balance and credit overdraft limit, so that the amount of freezing is greater than or equal to the amount of the payment
S403
Generate electronic payment certificate
S406
Send the electronic payment certificate to the merchant and the information centre server
S407
The merchant sends the payment information to the Funds-Management server
S408
The Funds-Management server synchronizes the payment information to the information centre server
S409
The funds corresponding to the freezing amount are allocated to the account number of the merchant
S410

Figure 4

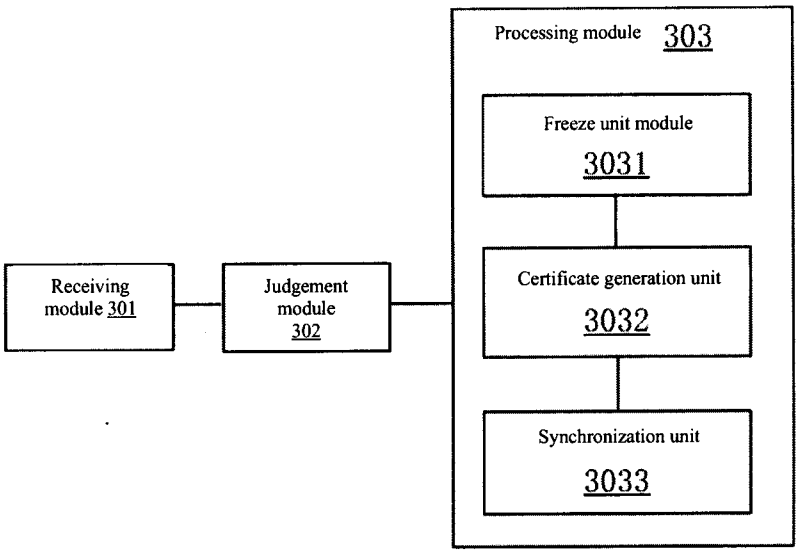


Figure 5

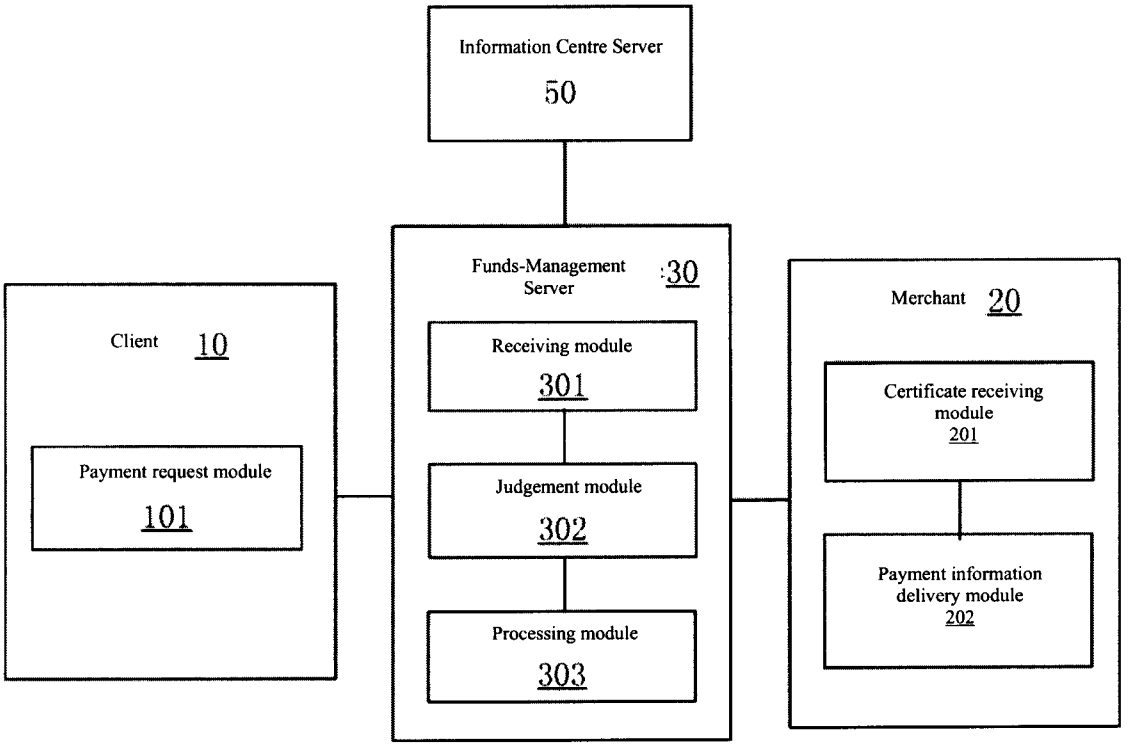
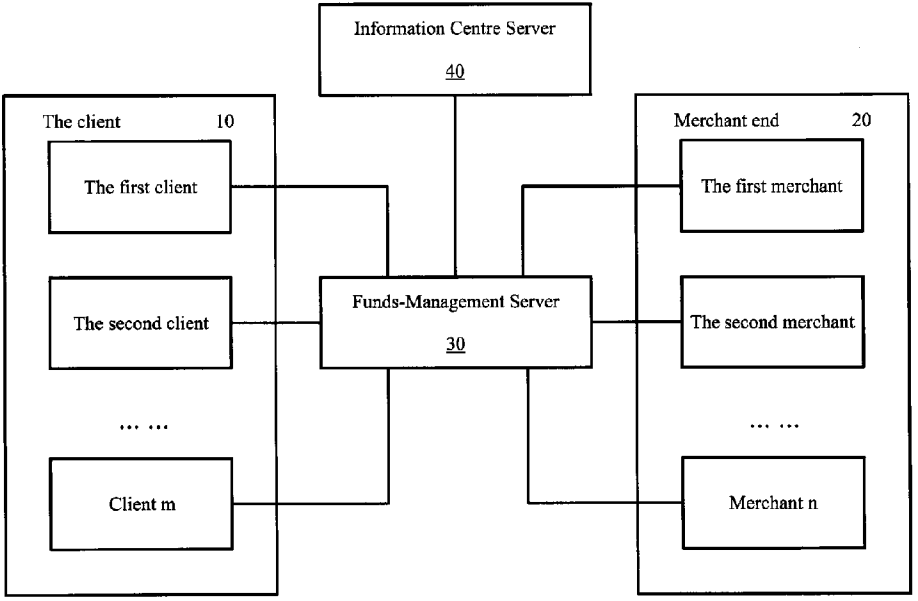


Figure 6


Information Centre Server
40
The client
10
The first client
The second client
... ...
Client m
Funds-Management Server
30
Merchant end
20
The first merchant
The second merchant
... ...
Merchant n