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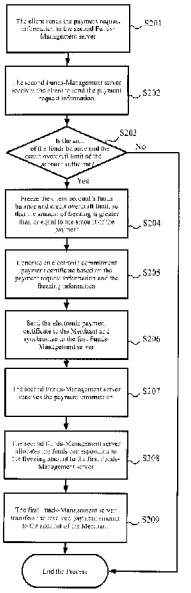
(54) Titre : SYSTEME DE PAIEMENT BASE SUR UN SERVEUR DE GESTION DE FONDS CROISES, ET PROCEDE, DISPOSITIF ET SERVEUR ASSOCIE

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



(57) Abrégé/Abstract:
Disclosed are a cross Funds-Management server-based payment system, and a method, device and server therefor, belonging to the field of e-commerce. The method comprises: a second Funds- Management server receives payment request information sent by a client; the sum of a funds balance and a credit overdraft limit of the client is compared with a payment amount, and it is determined whether an electronic commitment payment certificate can be opened; if so determined, the second Funds-Management server respectively freezes the funds balance and the credit overdraft limit within a client account, the funds balance and the credit overdraft limit corresponding to the payment amount; the electronic commitment payment certificate for the second Funds-Management server to commit to pay funds according to an agreed condition is generated, and the electronic commitment payment certificate is sent to a merchant to perform a credit commitment payment on behalf of the client, and synchronised 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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CROSS-FUNDS MANAGEMENT SERVER-BASED PAYMENT SYSTEM, AND METHOD, DEVICE AND SERVER THEREFOR

Technical Field

[0001] This invention refers to e-commerce field, especially, it is a cross funds server-based payment system and its method, device and server.

Background Technology

[0002] 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.

[0003] 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.

Summary

[0004] 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 a cross Funds-Management server to reduce the risk of user funds, and to protect the interests of buyers and sellers.

[0005] The technical solution of the present invention to solve the above-mentioned technical problems is as follows:

[0006] A payment system based on a cross Funds-Management server comprising at least one client, at least one merchant, information centre and client connected to the second Funds-Management server and the first Funds-Management server connected to the merchant, and the first Funds-Management server and second Funds-Management server respectively connected with the information centre server, wherein:

[0007] The said client for sending payment request information including at least the payment amount to the said second Funds-Management server;

[0008] The said Merchant for receiving the electronic commitment payment certificate sent by the second Funds-Management server;

[0009] The method comprises: the second Funds-Management server is used for receiving payment request information sent by the second Funds-Management server; comparing the sum of the request information of the client and the funds balance with the payment amount to determine whether an electronic commitment payment certificate can be created ; 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, and synchronize the electronic commitment payment certificate to the information centre server;

[0010] The first Funds-Management server is configured to store the electronic payment document information transmitted by the second Funds-Management server and allocate the received payment amount to the Merchant and account based on the electronic payment document information;

[0011] The information centre server for storing and supervising the electronic commitment payment certificate information.

[0012] According to another aspect of the present invention, there is a payment method based on a cross Funds-Management server, the method comprises the steps of:

[0013] The second Funds-Management server receives the payment request information sent by the client, wherein the payment request information includes at least the payment amount;

[0014] 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;

[0015] 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, and synchronize the electronic commitment payment certificate to the information centre server.

[0016] A payment device based on the cross Funds-Management server, the said device comprising a receiving module, a judging module and a processing module, wherein.

[0017] The receiving module is configured to receive payment request information delivered by the terminal which is connected to the second Funds-Management server, wherein the payment request information includes a payment amount;

[0018] 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;

[0019] 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 certificate, and deliver it to the merchant connected to the first Funds-Management server, and synchronize the electronic commitment payment certificate to the information centre server.

[0020] A server based on the cross Funds-Management server, which comprising a payment device according to any one of above claim.

[0021] The present invention provides a payment system based on different 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.

Brief Description of the Drawings

[0022] Figure 1 is a schematic diagram of the payment system based on the cross Funds-Management server provided by the Example of the present invention;

[0023] Figure 2 is a flow chart of the payment method based on the cross Funds-Management server provided by Example 2 of the present invention;

[0024] Figure 3 is a flow chart of the payment method based on the cross Funds-Management server provided by Example 3 of the present invention;

[0025] Figure 4 is a block diagram of a payment device based on the cross Funds-Management server provided by the Example 4 of the present invention;

[0026] Figure 5 is a block diagram of a payment system based on a cross Funds-Management server provided by the Example 5 of the present invention.

Detailed Description

[0027] 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.

[0028] Example 1

[0029] As shown in Figure 1, an example of the present invention provides a cross Funds-Management server payment system comprising at least one client 10, at least one merchant 20, information centre 50 and first Funds-Management 30 and second Funds-Management 40 which is interconnected with each other, wherein:

[0030] The client 10 is connected with server 40 of the second Funds-Management server for transmitting the payment request information to the second Funds-Management server 40, and the payment request information includes the payment amount.

[0031] 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 Funds-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 the information that the customer has written and confirmed shipping address information 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 second Funds-Management server 40. The payment request information includes at least the payment amount, and may include the Merchant information and the product information. Among them, the Merchant information can be directly the Merchant's receiving account, it can also uniquely identify the Merchant information (for an example, Merchant ID), by the Funds-Management server 40 on the unique identification of the merchant from the database to find the corresponding bank account information. 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 second Funds-Management server 40 inquires the Merchant's receiving account by using the corresponding relationship between the Merchant ID and its receiving account number. In other words, the client 10 only needs to inform the second Funds-Management server 40 to which Merchant and which goods to pay the amount of funds, the second Funds-Management server 40 will be able to call out the Merchant account to implement the appropriate payment operation.

[0032] The Merchant 20 is connected to the first Funds-Management server 30 for receiving the electronic commitment payment certificate transmitted by the second Funds-Management server 40.

[0033] Specifically, the Merchant 20 is adapted to the recipient (Merchant), and the Merchant includes but not limited to devices such as servers, and POS machines and so on. 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 40, and extracts the merchandise information and the goods receipt information in the electronic commitment payment voucher information to designate the merchandise transmission destination.

[0034] The second Funds-Management server 40 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 second Funds-Management server 40 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 50 .

[0035] Specifically, the second Funds-Management server 40 receives the packet of the payment request information and analyses it according to the reset rule to obtain the relevant payment information including but not limited to the Merchant information, the merchandise information, and the payment amount And other necessary information, that is, to which Merchant which goods to pay the amount of money. The second Funds-Management server 40 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.

[0036] It is understandable that the amount of funds to be frozen and the corresponding amount of credit overdrafts are included in the following cases:

1. 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.

2. 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.

3. Respectively, to freeze the balance of funds of the client account and credit overdraft limit, so that the total amount of frozen greater than or equal to the amount of the payment.

[0037] The information centre server 50 is respectively connected to the Funds-Management server 30 and second Funds-Management server 40 for storing and supervising the electronic commitment payment certificate information of the client 10 and the merchant 20.

[0038] Specifically, both the client 10 and the merchant 20 can obtain the electronic commitment payment certificate information to the information centre server 50 via the Internet for subsequent processing, such as the correctness of the dual channel authentication information using the data. The second Funds-Management server 40 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.

[0039] In the present example, the second Funds-Management server 40 may be connected to the plurality of clients 10 and via the Internet at the same time. The first Funds-Management server 30 may be connected to a plurality of Merchant terminals 20 and via the Internet at the same time. That is, the server where the Merchant 20 is located is not on the same server as the server where the client 10 is located. The second Funds-Management server 40 and the first Funds-management server 30 can be a single server in the physical sense, or it can work in parallel for multiple servers in the physical sense, such as multiple physical servers. According to the different traffic, the resources of the server are automatically allocated to realize the Funds-Management. The second Funds-Management server 40 and the first Funds-Management server 30 includes but is not limited to servers in institutions such as banks, businesses, and so on. In the practical applications, it can be understood as the same bank's cluster Funds-Management server, but not limited to banks, but also the Internet to support the flow of funds in other institutions. 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.

[0040] Example 2

[0041] As shown in Figure 2, an example of the present invention provides a payment method based on a cross Funds-Management server for use in a Funds-Management server, which method comprises the following steps:

[0042] S201, the client transmits the payment request information to the second Funds-Management server, and the payment request information includes the payment amount.

[0043] Specifically, the payment request information received by the second Funds-Management server includes Merchant information, product information and payment amount, and it may also include the client information (for an example, client ID). Among them, the merchant information can be merchants' account number, and it can also be the only identification of the merchant information (such as merchant ID), to find the corresponding bank account information based on the unique identification of the business from the database by the second Funds-Management server. 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 second Funds-Management server inquires the Merchant's receiving account by using the corresponding relationship between the Merchant ID and its receiving account number. In other words, the client only needs to inform the second Funds-Management server to which Merchant and which goods to pay the amount of funds, the second Funds-Management server will be able to call out the Merchant account to implement the appropriate payment operation.

[0044] S202, the second Funds-Management server receives the client to send the payment request information;

[0045] S203, 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;

[0046] S204, 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 :

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.

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.

3. Respectively, to freeze the balance of funds of the client account and credit overdraft limit, so that the total amount of frozen greater than or equal to the amount of the payment.

[0047] S205, the second Funds-Management server generates the electronic commitment payment certificate based on the payment request information and the freezing information and transmits the electronic commitment payment certificate to the Merchant;

[0048] Specifically, since the payment request information is sent by the buyer to the second Funds-Management server through the client's operation, the payment information is objectively confirmed by the customer and authorized by the bank. The second Funds-Management server freezes the corresponding funds and generates an electronic commitment payment certificate based on the payment information, and the Merchant provides the corresponding merchandise/service according to the electronic commitment payment certificate.

[0049] S206, the second Funds-Management server sends the electronic payment certificate to the merchant and synchronizes to the information centre and first Funds-Management server. Specifically, this Step sends the generated electronic certificate information to the information centre server so that the information centre server performs subsequent tracking.

[0050] S207, the second Funds-Management server receives the payment information;

[0051] S208, the second Funds-Management server allocates the funds corresponding to the freezing amount to the first Funds-Management server;

[0052] S209, the first Funds-Management server transfers the received payment amount to the account of the Merchant.

[0053] The payment method provided by the example of the present invention receives the payment request information of the client through the second Funds-Management server, determines whether the payment is permitted based on the sum of the funds balance and the payment amount 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 and synchronizes it to the information centre to supervise in real-time, which can reduce the risk of funds and protect the interests of the buyers and the sellers.

[0054] Example 3

[0055] 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:

[0056] S301, the client sends the payment request information to the second Funds-Management server, and the payment request information includes at least the payment amount.

[0057] 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.

[0058] The way the client sends payment request information to the second 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 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.

[0059] S302, the Funds-Management server receives the payment request information sent by the client.

[0060] Specifically, the payment request information received by the second Funds-Management server includes Merchant information, product information and payment amount, and it may also include the client information (for an example, client ID). Among them, the merchant information can be merchants' account number, and it can also be the only identification of the merchant information (such as merchant ID), to find the corresponding bank account information based on the unique identification of the business from the database by the second Funds-Management server. 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 second Funds-Management server inquires the Merchant's receiving account by using the corresponding relationship between the Merchant ID and its receiving account number. In other words, the client only needs to inform the second Funds-Management server to which Merchant and which goods to pay the amount of funds, the second Funds-Management server will be able to call out the Merchant account to implement the appropriate payment operation.

[0061] S303, 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 S305, or executing steps;

[0062] S304 asks the client whether to issue credit loan limit; if it is needed, executing Step S305, or terminating the process;

[0063] S305, judging whether the credit loan limit is sufficient; the sufficient can be understood in several cases:

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;

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.

[0064] 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.

[0065] S306, 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:

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.
2. Only the credit loan limit is frozen so that the total amount of the greater than or equal to the payment amount.
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.
4. Respectively, to freeze the balance of funds and credit overdraft limit of the client's account, making the total amount of frozen greater than or equal to the amount of the payment.
5. Respectively, to freeze part of the balance of funds and credit loan limit of the client's account, making the total amount of frozen greater than or equal to the amount of the payment.
6. Respectively, to freeze part of the credit loan limit and credit overdraft limit of the client's account, making the total amount of frozen greater than or equal to the amount of the payment.
7. Respectively, to freeze part of the credit loan limit and credit overdraft limit of the client's account, as well as the funds balance, making the total amount of frozen greater than or equal to the amount of the payment.

[0066] S307, the second Funds-Management server generates the electronic commitment payment certificate according to the payment request information and the freezing information;

[0067] Specifically, since the payment request information is sent by the buyer to the second Funds-Management server through the client's operation, the payment information is objectively

confirmed by the customer and authorized by the bank. The second Funds-Management server will freeze the corresponding the funds balance, credit overdraft limit or credit loan limit; meanwhile, it will generate an electronic commitment payment certificate based on the payment information, and the Merchant will provide the corresponding goods/services according to the electronic commitment payment certificate.

[0068] S308, the second Funds-Management server delivers the electronic payment certificate to the merchant and synchronizes to the information centre and first Funds-Management server. Specifically, this Step sends the generated electronic certificate information to the information centre server so that the information centre server performs subsequent tracking.

[0069] S309, the second Funds-Management server receives the payment information; it should be noted that In Step S408, the Merchant sends and receives the payment information to the Funds-Management server only as an example, and in practice, the client, a logistics server, or other entity that is aware of the delivery status to send payment information to the Funds-Management server.

[0070] S310, the second Funds-Management server allocates the funds corresponding to the freezing amount to the first Funds-Management server; it is understood that there will be a corresponding matching fund allocation scheme according to the different freezing methods in Step S306, and the funds allocated to the account of the Merchant.

[0071] S311, the first Funds-Management server transfers the received payment amount to the account of the Merchant

[0072] Finally, the process is ended.

[0073] The example of the present invention, on the basis of the second example, 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; In addition, by increasing the information centre can keep Buyers and sellers' electronic commitment certificate to track synchronization, the flow of commodity and the flow of funds trajectory can be effective combined to protect the interests of both buyers and sellers effectively.

[0074] Example 4

[0075] As shown in Figure 4, 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:

[0076] The receiving module 301 is configured to receive payment request information delivered by the first Funds-Management server, wherein the payment request information includes a payment amount.

[0077] Specifically, the payment request information received by the receiving module 301 includes Merchant information, product information and payment amount, and may include the client information (for an example, client 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.

[0078] 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.

[0079] 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.

[0080] 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 the Funds-Management server, 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.

[0081] The processing module 303 configured to freeze the balance of funds, the credit overdrafts limit and credit loan limit 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 certificate, and deliver it to the merchant connected to the second Funds-Management server, and synchronize the electronic commitment payment certificate to the information centre server.

[0082] Preferably, the processing module 303 further includes a freeze unit 3031, a certificate generation unit 3032, and a synchronization unit 3033, wherein:

[0083] 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;

[0084] The credential generation unit 3032 is configured to generate an electronic commitment payment certificate;

[0085] The synchronization unit 3033 is configured to transmit the electronic commitment payment certificate information to the merchant.

[0086] 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 corresponding frozen funds to the merchant account in the Funds-Management server.

[0087] It is important to note that the technical features of the above-described method examples 2 and 3 are applicable in the present apparatus and are not repeated here.

[0088] In addition, the present invention also provides a Funds-Management server including the payment device in the fourth example, which is not repeated here.

[0089] 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 and synchronize the it to the information centre server 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.

[0090] Example 5

[0091] As shown in Figure 5, a preferred payment method provided by the example of the present invention based on a cross Funds-Management server, which includes client 10, the second Funds-Management server 40 connected to merchant 20 and client 10, merchant 20 connected to the Funds-Management server 30, and the information centre 50 connected to the first Funds-Management server 30 and second Funds-Management server 40 respectively. Among them:

[0092] The information centre server 50 is used to store and supervise the electronic commitment payment certificate information.

[0093] The client 10 includes a payment request module 101 configured to send payment request information to the second Funds-Management server 40, and the payment request information includes Merchant information, product information, and payment amount.

[0094] The merchant 20 includes a certificate receiving module 201 and a certificate updating module 202, wherein the certificate receiving module 201 is configured to receive the electronic commitment payment certificate sent by the fund managing server 40.

[0095] The second Funds-Management server 40 includes a receiving module 301, a judgement module 302, and a processing module 303, wherein:

[0096] The receiving module 301 is configured to receive payment request information delivered by the client connected to second Funds-Management server 40;

[0097] 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;

[0098] 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.

[0099] The processing module 303 is configured to freeze the limit corresponding to the payment amount in the client account when payment is allowed, and generate an electronic commitment payment certificate to deliver the electronic commitment payment certificate information to the merchant 30 connected to the first Funds-Management server 30, and synchronized to the information centre server 50.

[0100] As a preferred example, the receiving module 301 of the second Funds-Management server 40 is also responsible for receiving the payment information; the processing module 303 also includes a transferring module, synchronizes the payment information to the information centre server 50, which is configured to transfer equal funds to the account of the merchant 20 after receiving the payment information.

[0101] Specifically, since the payment request information is sent by the buyer to the second Funds-Management server 40 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 40 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 commitment payment 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.

[0102] 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.

[0103] The preferred examples of the present invention have been described above with reference to the accompanying drawings, which are not to limit the scope of the present invention. It will be

apparent to those skilled in the field that various modifications, equivalents, and improvements may be made without departing from the scope and spirit of the invention.

Claims:

1. A method of combining a plurality of data packets related to a purchase transaction into payment request information, the method comprising:

collecting information related to a purchase transaction through a user interface with multiple packets;

storing merchant information, product information, and payment amount;

requesting that the payment be made to the merchant using a funds-management server based on unique identification of the merchant from a database; and

informing the funds-management server to which merchant and to which goods to pay the amount of funds.

2. The method of claim 1, wherein the payment request information includes client information such as client identification (ID).

3. The method of any one of claims 1-2, wherein the payment request information includes merchant business identification (ID).

4. The method of any one of claims 1-3, wherein the payment request information includes corresponding bank account information based on the unique identification of the merchant from the database.

5. The method of claim 1, wherein the funds-management server is a single physical server.

6. The method of claim 1, wherein the funds-management server is a single bank server.

7. The method of claim 1, wherein the funds-management server is a single cluster server.

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8. The method of claim 1, wherein the funds-management server is a single cluster bank server.

9. The method of any one of claims 1-8, wherein the funds-management server is connected to the Internet.

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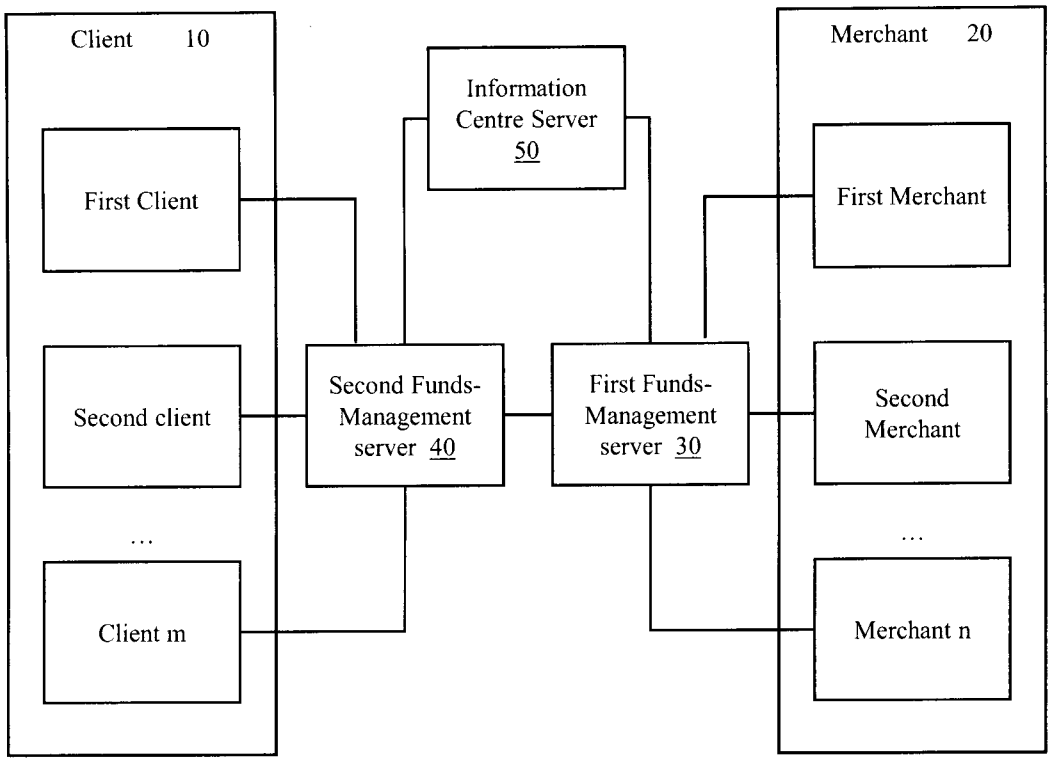

Client 10
First Client
Second client
...
Client m
Information Centre Server 50
Second Funds-Management server 40
First Funds-Management server 30
Merchant 20
First Merchant
Second Merchant
...
Merchant n

Figure 1

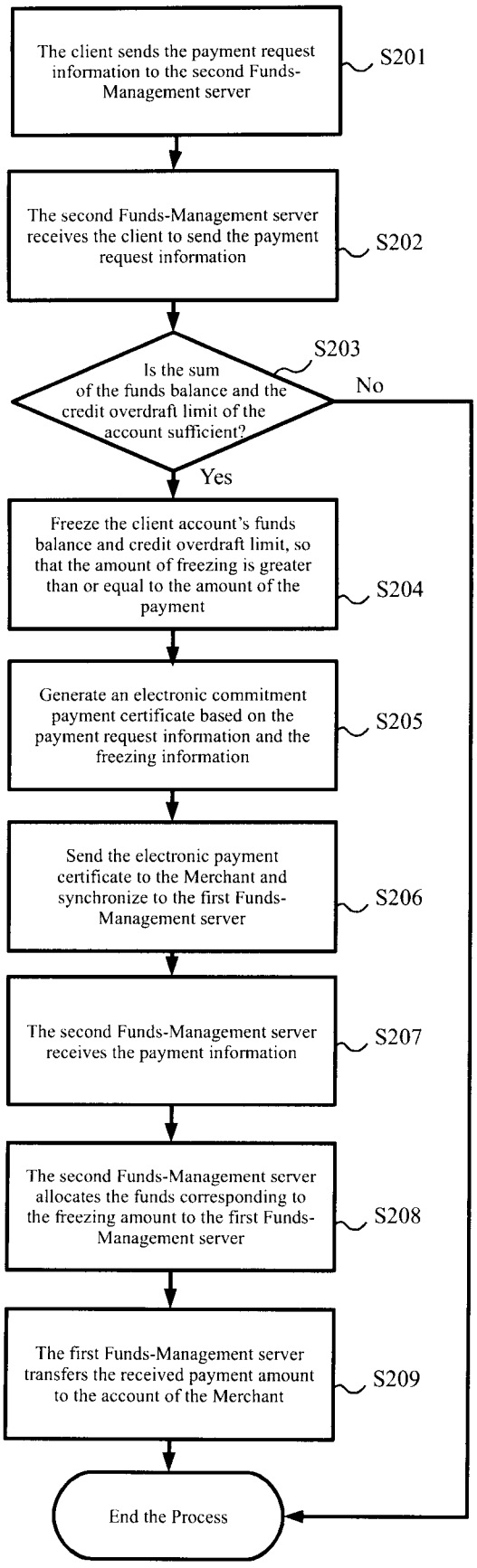

The client sends the payment request information to the second Funds-Management server
S201
The second Funds-Management server receives the client to send the payment request information
S202
S203
Is the sum of the funds balance and the credit overdraft limit of the account sufficient?
No
Yes
Freeze 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
S204
Generate an electronic commitment payment certificate based on the payment request information and the freezing information
S205
Send the electronic payment certificate to the Merchant and synchronize to the first Funds-Management server
S206
The second Funds-Management server receives the payment information
S207
The second Funds-Management server allocates the funds corresponding to the freezing amount to the first Funds-Management server
S208
The first Funds-Management server transfers the received payment amount to the account of the Merchant
S209
End the Process

Figure 2

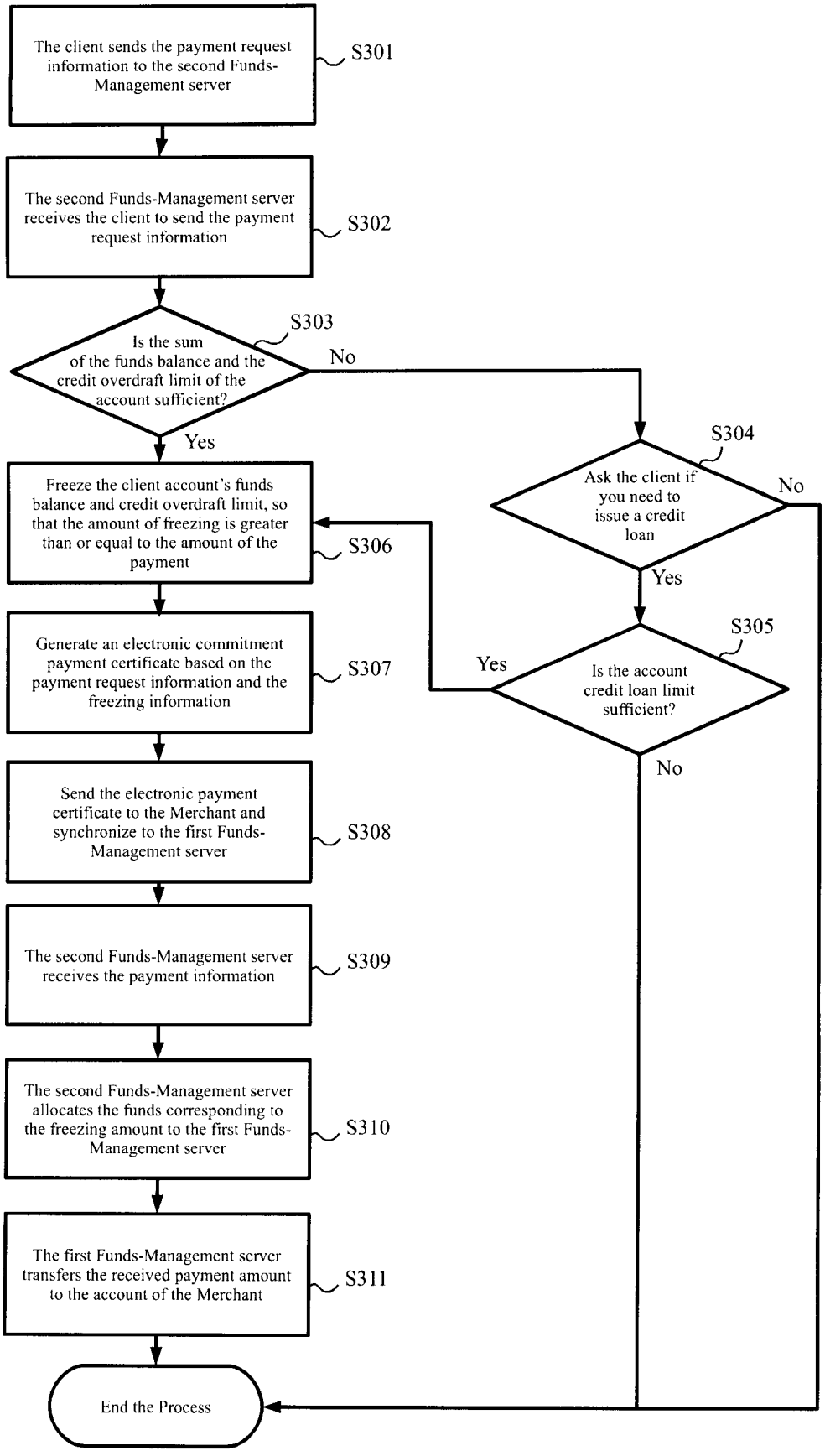

The client sends the payment request information to the second Funds-Management server
S301
The second Funds-Management server receives the client to send the payment request information
S302
S303
Is the sum of the funds balance and the credit overdraft limit of the account sufficient?
No
Yes
S304
Ask the client if you need to issue a credit loan
No
Yes
S305
Is the account credit loan limit sufficient?
Yes
No
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
S306
Generate an electronic commitment payment certificate based on the payment request information and the freezing information
S307
Send the electronic payment certificate to the Merchant and synchronize to the first Funds-Management server
S308
The second Funds-Management server receives the payment information
S309
The second Funds-Management server allocates the funds corresponding to the freezing amount to the first Funds-Management server
S310
The first Funds-Management server transfers the received payment amount to the account of the Merchant
S311
End the Process

Figure 3

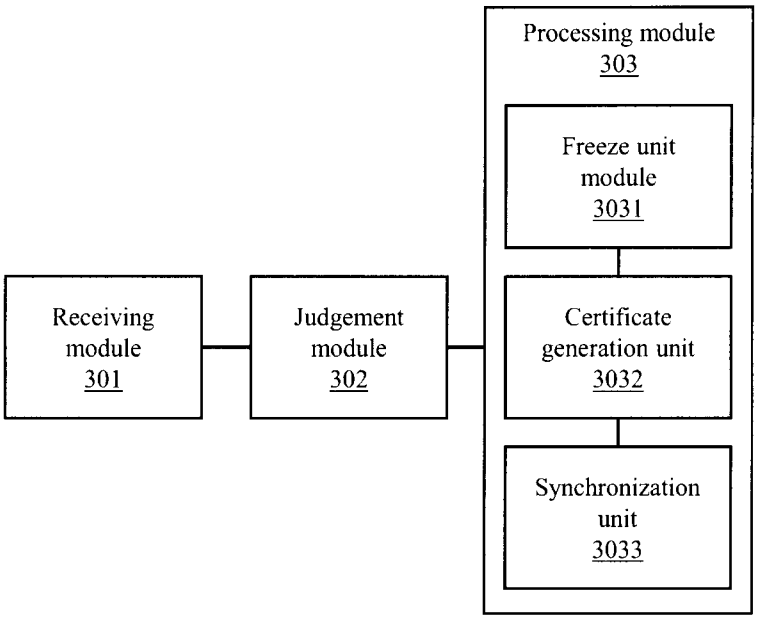


Figure 4

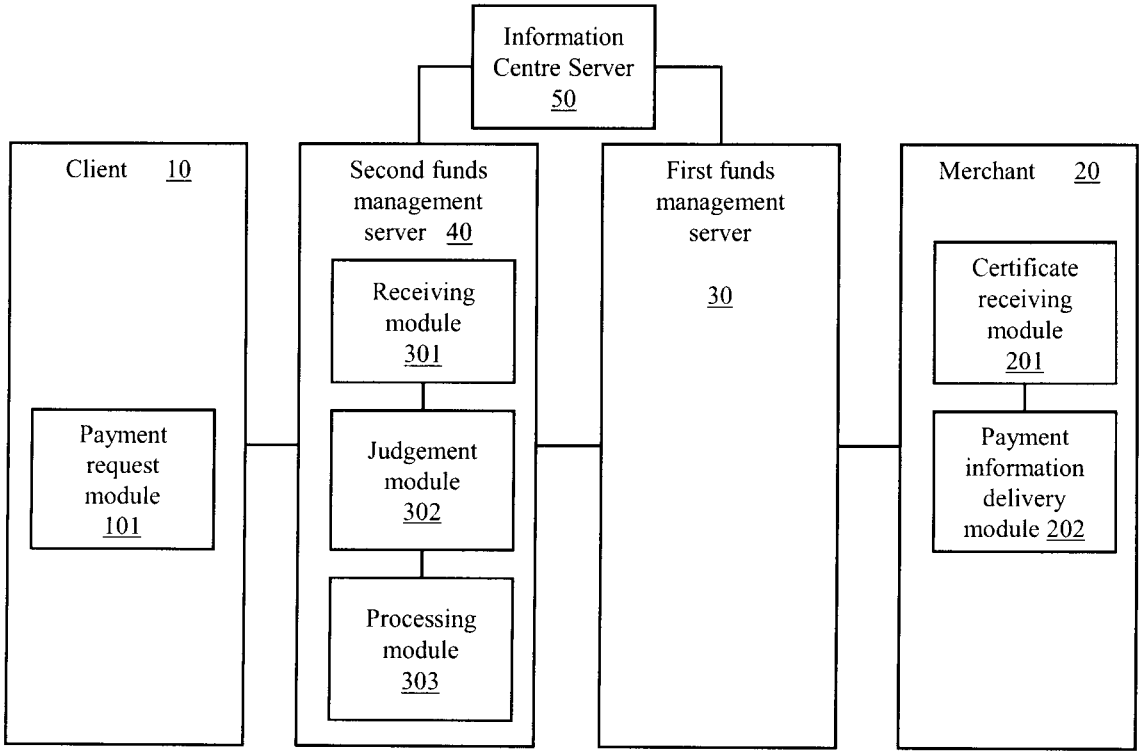
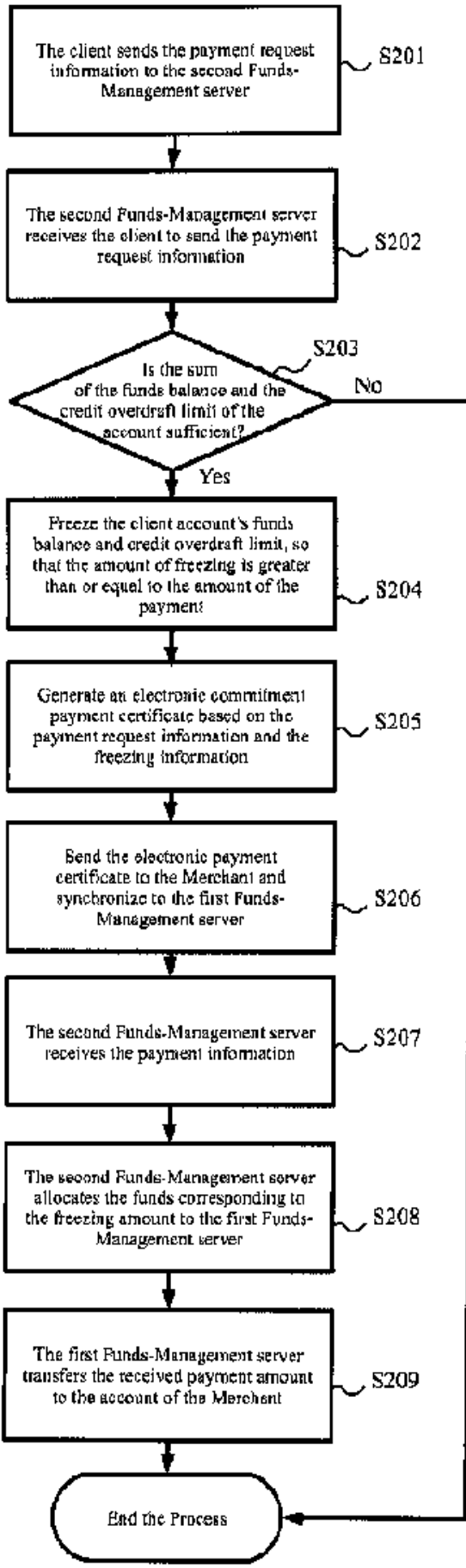


Figure 5


The client sends the payment request information to the second Funds-Management server
S201
The second Funds-Management server receives the client to send the payment request information
S202
S203
Is the sum of the funds balance and the credit overdraft limit of the account sufficient?
No
Yes
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
S204
Generate an electronic commitment payment certificate based on the payment request information and the freezing information
S205
Send the electronic payment certificate to the Merchant and synchronize to the first Funds-Management server
S206
The second Funds-Management server receives the payment information
S207
The second Funds-Management server allocates the funds corresponding to the freezing amount to the first Funds-Management server
S208
The first Funds-Management server transfers the received payment amount to the account of the Merchant
S209
End the Process