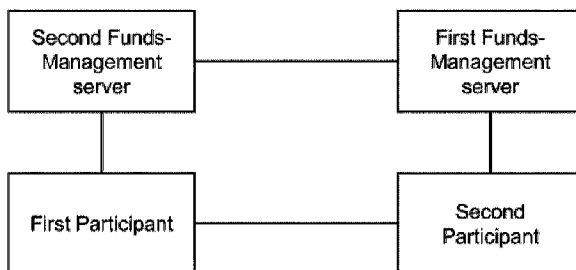




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(54) Titre : PROCÉDE DE PRET EN LIGNE, ET PROCÉDE, DISPOSITIF ET SYSTEME DE TRAITEMENT D'INTERACTION DE DONNEES  
(54) Title: ONLINE LENDING METHOD, AND DATA INTERACTION PROCESSING METHOD, DEVICE AND SYSTEM



(57) **Abrégé/Abstract:**

A lending method, and a data interaction processing method, device and system. The lending method comprises: first and second participants respectively submit first and second borrowing requests; after receiving the first and second borrowing requests, a third participant submits an application to open credit certificates to a first funds management server; the first funds management server generates corresponding first and second credit certificates, and respectively freezes corresponding first and second funds of the third participant; according to the first and second credit certificates, a second funds management server grants funds to the first participant which are equal to the first funds, and grants funds to the second participant which are equal to the second funds, the second funds management server setting a repayment time for the granted funds, and monitoring a repayment date of the first participant and the second participant. The present invention reduces the lending risk for a loan initiator.

## **Abstract**

A lending method, and a data interaction processing method, device and system. The lending method comprises: first and second participants respectively submit first and second borrowing requests; after receiving the first and second borrowing requests, a third participant submits an application to open credit certificates to a first funds management server; the first funds management server generates corresponding first and second credit certificates, and respectively freezes corresponding first and second funds of the third participant; according to the first and second credit certificates, a second funds management server grants funds to the first participant which are equal to the first funds, and grants funds to the second participant which are equal to the second funds, the second funds management server setting a repayment time for the granted funds, and monitoring a repayment date of the first participant and the second participant. The present invention reduces the lending risk for a loan initiator.

# ONLINE LENDING METHOD, AND DATA INTERACTION PROCESSING METHOD, DEVICE AND SYSTEM

## **Technical Field**

[0001] The present invention relates to the field of credit, and in particular, to a borrowing method, data interaction processing method, device and system.

## **Background**

[0002] Private lending is divided into private personal loans and loans between citizens and financial enterprises. As private lending is mostly conducted in the semi-public or even secret circumstances, both the borrower and the lender generally test the so-called reputation maintenance, incomplete credit procedures, lack of secured mortgages and unreliable legal guarantees. In the event of a change of circumstances, the lender is very likely that the money lent to the borrower will not be recoverable.

[0003] With the development of Internet technology and especially mobile Internet technology, users can connect to the Internet through mobile devices using 2G, 3G, 4G or WiFi to conduct transactions and social activities. Users can conveniently and effectively perform online activities, this is an incomparable experience with offline. As a result, it is necessary to provide an online-based loan method.

[0004] Further, since users can realize various ways of data interaction through the Internet, it is necessary to provide an online data interaction processing method.

## **Summary**

[0005] It is an object of the present invention to provide an online lending method.

[0006] An online lending method provided by the present invention, the method includes: a First Participant and a Second Participant submits a first loan request and a second loan request; a Third Participant receives the first loan request and a second loan request respectively, thereafter respectively submitting a credit certificate application to the first Funds-Management server; according to the said credit certificate; the first Funds-Management server applies an application to generate corresponding first credit certificate and second credit certificate, and then freezing the Third Participant's first funds that equal to borrowing limit of the first loan request and freezing

the second funds that equal to the borrowing limit of the second loan request; the said first credit certificate and the second credit certificate are sent to the second Funds-Management server; after receiving the said first credit certificate and the second credit certificate, the second Funds-Management server issues the First Participant funds that equal to the first funds and funds that equal to the second funds; wherein the second Funds-Management server sets the repayment time of the issued funds and monitors the repayment date of the First Participant and the Second Participant; the first Funds-Management server is the account management server for the Third Participant, and the second Funds-Management server is an account management server for the First Participant and the Second Participant.

**[0007]** Another online lending method provided by the present invention includes: a first Funds-Management server receives, an application for opening a credit by a First Participant and Second Participant according to a first loan request and a second loan request of a First Participant and a Second Participant; based on the credit certificate opening application, generate a first credit certificate and a second credit certificate, and then freezing the Third Participant's first funds that equal to borrowing limit of the first loan request and freezing the second funds that equal to the borrowing limit of the second loan request; the said first credit certificate and the second credit certificate are sent to the second Funds-Management server; after receiving the said first credit certificate and the second credit certificate, the second Funds-Management server issues the First Participant funds that equal to the first funds and issues the Second Participant funds that equal to the second funds; wherein the second Funds-Management server sets the repayment time of the issued funds and monitors the repayment date of the First Participant and the Second Participant; the first Funds-Management server is the account management server for the Third Participant, and the second Funds-Management server is an account management server for the First Participant and the Second Participant.

**[0008]** Another online lending method provided by the present invention includes: the second Funds-Management server receives the said first credit certificate and the second credit certificate; wherein, the first credit certificate and the second credit certificate are generated correspondingly after the first Funds-Management server receives the Third Participant's first loan request and second loan request submitted according to the First Participant and the Second Participant, issues the First Participant funds that equal to the first funds and issues the Second Participant funds that equal to the second funds; wherein the second Funds-Management server sets the repayment time

of the issued funds and monitors the repayment date of the First Participant; the first Funds-Management server is the account management server for the First Participant and the Second Participant, the first Funds-Management server is an account management server for the Third Participant. And the second Funds-Management server is an account management server for the First Participant and the Second Participant.

**[0009]** In the aforesaid on-line lending method, the Third Participant applies to the First and Second Participant Funds-Management server for issuing the credit certificate when receiving the loan request of the First Participant, and the first Funds-Management server freezes the corresponding fund. The second Funds-Management server issues the frozen funds to the First and Second Participant based on the credit certificate. As a result, the Funds-Management server is used as an intermediary platform for the three parties, the Third Participant guarantees the first Funds-Management server, and the associated second Funds-Management server issues the loan to the First and Second Participant, thereby facilitating the First and Second Participant applies loan online; in addition, the second Funds-Management server monitors the repayment date of the First and Second Participant, thereby reducing the loan risk of the loan initiator.

**[0010]** Another object of the present invention is to provide a data interaction processing method, a data interaction system, and a data processing device.

**[0011]** The present invention provides a data interaction processing method, in which a first data requester initiates a first data request that needs to add a first data value to its data unit thereof; a second data requester initiates a second data request that needs to add a second data value to its data unit thereof; the data initiator receives the first data request and the second respectively, and submits the data certificate opening application to the First Service Party; the First Service Party opens application and generates the first data certificate and the second data certificate correspondingly according to the data certificate and locks the first data in the data unit of the said data initiator that is equal to the first data value and locks the second data that is equal to the second data value, and send the first data certificate and the second data certificate to a Second Service Party; after receiving the first data certificate and the second data certificate, the Second Service Party adds a data value equal to the first data size to the first data requester data unit and the data value equal to the second data size to the second data requester; Wherein the Second Service Party sets that the first data requester and the second data requester should add a data value equal to the first data and the second data to the Second Service Party data unit respectively a predetermined

time.

**[0012]** Another data interaction processing method provided in the present invention includes: the First Service Party receives the respective opening application of the data initiator according to the submitted data of the first data request and the second data request; wherein, the first data request is the request that the first data requester initiates and requires to add the first data value to its data unit; the second data requester initiates and requires to add the second data value to its data unit; according to the data certificate, open application and generate respective first data certificate and second data certificate, lock the first data in the data unit of the data initiator and the first data is equal to the first data value, and lock the second data in the data unit of the data initiator and the second data is equal to the second data value; send the first data certificate and the second data certificate to the Second Service Party, after the Second Service Party receives the first data certificate and the second data certificate, add the data value that equals to the first data size in data unit of the first data requester and add the data value that equal to the second data size in the data unit of the second data requester; wherein the Second Service Party sets that the first data requester and the second data requester should add a data value equal to the first data and the second data to the Second Service Party data unit within a predetermined time.

**[0013]** Another aspect of the present invention provides a data interaction processing method, where the method includes: a Second Service Party receives a first data certificate and a second data certificate, wherein, the First Service Party receives the first data request of the first data initiator, according to the data of the first data requester, raises the data certificate and open an application to generate the first data certificate; the First Service Party receives the first data request of the second data initiator, according to the data of the first data requester, raises the data certificate and open an application to generate the second data certificate; the first data request is initiated by the data requester, and shall add the request of the first data value in its data unit; add a data value equal to the first data size in the data unit of the said data requester and the data value equal to the said second data size; wherein, the said Second Service Party sets that the first data requester and the second data requester should add a data value equal to the first data and the second data to the Second Service Party data unit within a predetermined time.

**[0014]** An example of the present invention provides a data interaction processing system, including: a first data request terminal, configured to initiate a first data request that needs to add a first data value to a data unit thereof; a second data request terminal, configured to initiate a

second data request that needs to add a second data value to a data unit thereof; a first data initiating terminal, configured to receive the first data request and the second data request, and submit the data certificate opening application; a First Server, configured to open an application to generate a first data certificate and a second data certificate according to the data certificate, lock the first data in the data unit of the first data initiating terminal and the first data is equal to the data value represented by the first data certificate, and lock the second data in the data unit of the second data initiating terminal and the second data is equal to the data value represented by the second data certificate. A Second Server, configured to add a data value equal to the first data size and the second data size to the data requester data unit after receiving the first data certificate and the second data certificate respectively; wherein the Second Server sets the data request terminal to add a data value equal to the first data size and the second data size to the Second Server data unit within a predetermined time.

**[0015]** A device for data interaction processing provided by the present invention includes: a receiving module, configured to receive an application for opening a data certificate that is proposed by the data initiator according to a the first data request and a second data request respectively; wherein the first data request is that the first data requester initiates a request for adding a first data value to a data unit thereof; the second data request is that the second data requester initiates a request for adding a second data value to a data unit thereof; a processing module, configured to open an application and generate the first data certificate and the second data certificate according to the said data certificate; lock the first data in the data unit of the said data initiator and the first data is equal to the first data value and the second data is equal to the second data value; send the first data certificate and the second data certificate to the Second Service Party; the issuing module, configured to send the first data certificate and the second data certificate to a Second Service Party, so that after the Second Service Party receives the first data certificate and the second data certificate, add the data value equal to the first data size in the data unit and add the data value equal to second data size; wherein the Second Server sets the first data requester and the second data requester to add a data value equal to the first data size and the second data size to the Second Server data unit within a predetermined time.

**[0016]** Another data interaction processing device provided in the present invention includes: a receiving module, configured to receive a first data certificate and a second data certificate; wherein the first data certificate is used by a First Service Party to receive data from a first data

initiator according to the first data request, and the first data certificate is generated based on the raised data certificate opening application from the request; the second data certificate is used by a First Service Party to receive data from a data initiator according to the second data request, and the second data certificate is generated based on the raised data certificate opening application from the request; the first data request is that the first data requester initiates a request for adding a first data value to a data unit thereof; the second data requester initiates a request for adding a second data value to a data unit; the issuing module, adds the data value equal to the first data size in the data unit of the first data requester and add the data value equal to second data size; wherein the Second Server sets the first data requester and the second data requester to add a data value equal to the first data size and the second data size to the Second Server data unit within a predetermined time.

**[0017]** In the data interaction processing method, the data interaction system, and the data processing device, when a first data requester and a second data requester initiate a data request that needs to add a data value to a data unit thereof after receiving a data request of the data initiator, the First Service Party opens the data certificate according to the request of the data initiator and locks the corresponding first data and second data so that the Second Service Party adds the value of the first data and the second data to the data requester according to the data certificate and requests the data requester adds the value of the first data and the second data to the Second Service Party data unit within a predetermined time. Therefore, during the process of data exchange, the First and the Second Service Party are added into the interaction process. After the data initiator sends the server for credit guarantee, the server becomes the actual data issuer, so that the data interaction is more conveniently and safely handled.

### **Brief Description of the Drawings**

**[0018]** Figure 1 is a lending method in a first example of the present invention;

**[0019]** Figure 2 is a schematic diagram of lending relationship in the example of the present invention;

**[0020]** Figure 3 is a schematic flowchart of a lending method in a second example of the present invention;

**[0021]** Figure 4 is a schematic flowchart of a lending method in a third example of the present invention;

[0022] Figure 5 is a schematic flowchart of a lending method in a fourth example of the present invention;

[0023] Figure 6 is a schematic flow chart of a data interaction processing method in a first example of the present invention;

[0024] Figure 7 is a schematic diagram of data interaction in an example of the present invention;

[0025] Figure 8 is a schematic flowchart of a data interaction processing in a second example of the present invention;

[0026] Figure 9 is a schematic flowchart of a data interaction processing method in a third example of the present invention;

[0027] Figure 10 is a schematic structural diagram of a data interaction processing system in an example of the present invention;

[0028] Figure 11 is a schematic diagram of a connection relationship of data interaction in an example of the present invention;

[0029] Figure 12 is a flow chart of a data interaction processing device in a first example of the present invention;

[0030] Figure 13 is a schematic flowchart of a data interaction processing device in a second example of the present invention;

### **Detailed Description**

[0031] The present invention will be described in detail below with reference to the accompanying drawings and examples.

[0032] Referring to Figure 1, it is a schematic flowchart of a lending method according to a first example of the present invention. Please see Figure 2, at the same time, combined with the lending relationship diagram, the method flow shown in this example includes:

[0033] Step S10, the First Participant and Second Participant submit the first loan request and the second loan request, respectively.

[0034] Step S11, the Third Participant receives the first loan request and the second loan request, and then submits the credit application to the first Funds-Management server.

[0035] This letter of credit is a Bank Credit Certificate, opened for the loan initiator with his bank account funds or credit lines as a guarantee, and the bank promises to process payment and

settlement of electronic credit certificates in accordance with the terms of the settlement.

**[0036]** Referring to Figure 3, further, step S10, that is, submitting a first loan request and a second loan request by the First Participant and the Second Participant, which is specifically implemented through the following steps:

**[0037]** Step S10a, the First Participant and Second Participant submit the first loan request and the second loan request respectively through a server platform.

**[0038]** Wherein, the server platform can be an e-commerce platform, and the First and Second Participant may also visit the e-commerce platform through an application installed in an intelligent terminal to complete the initiation of a lending request.

**[0039]** Step 11, that is, the Third Participant receives the first loan request and the second loan request, and then submits the application for opening the credit certificate to the first Funds-Management server, specifically by the following steps:

**[0040]** Step S11a, the Third Participant receives the first loan request and the second loan request through the server platform and submits a credit application to the first Funds-Management server.

**[0041]** The Third Participant can also visit the server platform to find and receive the lending request of the First Participant and the Second Participant.

**[0042]** Step S12, the First Funds-Management server opens an application to generate a first credit certificate and a second credit certificate according to the credit certificate, and then, the first funds in the Third Participant equal to the first loan request are frozen; the second funds equal to the loan amount of the second loan request are frozen, and the first credit certificate and the second credit certificate are sent to the Second Funds-Management server.

**[0043]** Step S13, after receiving the first credit certificate and a second credit certificate, the second Funds-Management server issues the funds equal to the first funds to the First Participant and the funds equal to the second funds.

**[0044]** Wherein the second Funds-Management server sets the repayment time of the issued funds and monitors the repayment date of the First Participant and the Second Participant.

**[0045]** The first Funds-Management server is an account management server of the Third Participant,

**[0046]** The second Funds-Management server is an account management server of the First Participant and Second Participant.

**[0047]** In the present example, the first Funds-Management server is the first bank's Funds-Management server, and the second Funds-Management server is the second bank's Funds-Management server. The frozen fund is a deposit of the Third Participant in the first Funds-Management server or a credit limit given by the first Funds-Management server to the Third Participant, or the Third Participant mortgages the real estate to the first Funds-Management server.

**[0048]** In other examples, the first Funds-Management server and the second Funds-Management server are the same Funds-Management server.

**[0049]** In the method of the present invention, the First Participant and the Second Participant are a borrower, and the Third Participant is a loan initiator.

**[0050]** For example, the first borrower issues a first loan request for borrowing ¥100,000 and the second borrower issues a second loan request for borrowing ¥80,000. After receiving the first loan request and the second loan request, the loan initiator respectively apply to the first bank for presenting the first credit certificate and the second credit certificate. Among them, the value of the first credit merit ¥100,000, the second merit worth ¥80,000. Or, the value of the first credit is equivalent to ¥120,000, the value of the second credit is equal to ¥60,000. In short, the sum of the value of the first credit certificate and the second certificates is equal to ¥180,000, that is the sum of the first loan request and the second loan request. The first bank freezes the funds of the originator of the loan in this first bank, wherein the sum of the value of the frozen funds equals the sum of the first and second certificates. For example, freezing ¥180,000 of the loan initiator in bank deposits as a guarantee for the loan initiator. Then, the second bank allocates ¥180,000 of the loan requests of the first borrower and the second borrower according to the credit certificate sent by the first bank, that is, ¥100,000 of the ¥180,000 funds are distributed to the first borrower and the remaining ¥80,000 were paid to the second borrower when the first borrower and the second borrower borrowed money successfully.

**[0051]** For the first loan initiator, the deposit of ¥180,000 in the bank are not lent to the borrower by the bank, but simply frozen by the bank. The ¥180,000 deposits are still in the loan initiator party's account and belong to the loan party. As a result, the risk is greatly reduced and the additional benefits may also be gained because the ¥180,000 deposit still belongs to himself. For the borrower, it borrows from the loaner instead of borrowing from the bank, but the actual fund comes from the bank, and the fund is still returned to the bank. Based on the bank's solid

strength and counter-force, it will strengthen self-discipline to match the borrowers to complete the whole borrowing process and also further reduces the loan risk. And because the bank's strength has made it easier to borrow money, the borrower can easily borrow money. For the banks, the borrowed ¥180,000 funds borrowed by the initiate borrower were frozen ¥180,000 as a guarantee of storage, the risk is not borne by the bank, and because of its solid strength and counter-force, and it can guarantee the smooth completion of the loan process to some extent. After the borrowing is successfully completed, it can increase potential customers and obtain more information of the customer, and gain the additional benefits due to the whole loan process.

**[0052]** In the aforesaid method, the Third Participant apply to the first Funds-Management server for issuing the credit certificate when receiving the loan request of the First and Second Participant, and the first Funds-Management server freezes the corresponding funds. The second Funds-Management server issues the frozen funds to the First and Second Participant based on the credit certificate. As a result, the Funds-Management server is used as an intermediary platform for the three parties, the Third Participant guarantee the first Funds-Management server, and the associated second Funds-Management server issues a loan to the First and Second Participant to facilitate the First and Second Participant to apply loan online. In addition, the second Funds-Management server monitors the repayment date of the First and Second Participant, thereby reducing the loan risk of the loan initiator.

**[0053]** Please refer to Figure 4, it is a schematic flowchart of a lending method in a third example of the present invention. The method flow shown in this example includes:

**[0054]** Step S20, the first Funds-Management server receives the Third Participant's application for opening the credit certificate according to the first loan request and the second loan request of the First Participant and the Second Participant.

**[0055]** Step S12, open an application to generate a first credit certificate and a second credit certificate according to the credit certificate, and then, the first funds in the Third Participant equal to the loan amount of the first loan request are frozen; the second funds equal to the loan amount of the second loan request are frozen, and the first credit certificate and the second credit certificate are sent to the Second Funds-Management server.

**[0056]** This letter of credit is a Bank Credit Certificate, opened for the loan initiator with his bank account funds or credit lines as a guarantee, and the bank promises to process payment and settlement of electronic credit certificates in accordance with the terms of the settlement.

**[0057]** Step S22, send the first credit certificate and the second credit certificate to a second Funds-Management server, so that after receiving the first credit certificate and the second credit certificate, the second Funds-Management server issues the funds equal to the first funds to the First Participant and the funds equal to the second funds to the Second Participant.

**[0058]** Wherein the second Funds-Management server sets the repayment time of the issued funds and monitors the repayment date of the First Participant and the Second Participant.

**[0059]** The first Funds-Management server is an account management server of the Third Participant, and the second Funds-Management server is an account management server of the First Participant and the Second Participant.

**[0060]** In the present example, the first Funds-Management server is the first bank's Funds-Management server, and the second Funds-Management server is the second bank's Funds-Management server. The frozen fund is a deposit of the Third Participant in the first Funds-Management server or a credit limit given by the first Funds-Management server to the Third Participant, or the Third Participant mortgages the real estate to the first Funds-Management server.

**[0061]** In other examples, the first Funds-Management server and the second Funds-Management server are the same Funds-Management server.

**[0062]** In the method of the present invention, the First and Second Participant is a borrower, and the Second Participant is a loan initiator.

**[0063]** Referring to Figure 5, it is a schematic flowchart of an online lending method in a fourth example of the present invention. The method flow shown in this example includes:

**[0064]** Step S30, the second Funds-Management server receives the first credit certificate and the second credit certificate. Wherein the first credit certificate and the second credit certificate are generated by the first Funds-Management server by receiving the credit application opening request submitted by the Third Participant according to the first loan request and the second loan request of the First Participant and the Third Participant.

**[0065]** Step S31, issue the funds equal to the first funds to the First Participant and the funds equal to the second funds to the Second Participant.

**[0066]** Wherein the second Funds-Management server sets the repayment time of the issued funds and monitors the repayment date of the First Participant and the Second Participant.

**[0067]** The first Funds-Management server is an account management server of the Third

Participant, and the second Funds-Management server is an account management server of the First Participant and the Second Participant.

**[0068]** In the present example, the first Funds-Management server is the first bank's Funds-Management server, and the second Funds-Management server is the second bank's Funds-Management server. The frozen fund is a deposit of the Third Participant in the first Funds-Management server or a credit limit given by the first Funds-Management server to the Third Participant, or the Third Participant mortgages the real estate to the first Funds-Management server.

**[0069]** In other examples, the first Funds-Management server and the second Funds-Management server are the same Funds-Management server.

**[0070]** In the method of the present invention, the First Participant and the Second Participant are a borrower, and the Third Participant is a loan initiator.

**[0071]** Please refer to Figure 6, it is a schematic flowchart of a data interaction processing method according to a first example of the present invention. Please see Figure 7 at the same time, the data interaction relationship diagram. The method flow shown in this example includes:

**[0072]** Step S40, the first data requester proposes a first data request that needs to add a first data value to its data unit and the second data requester proposes a second data request that needs to add a second data value to its data unit;

**[0073]** Specifically, the first data requester and the second data requester initiate a data request of the first data through the First Server platform.

**[0074]** Step S41, the data initiator receives the first data request and the second data request, and submits the data certificate open request to the First Service Party.

**[0075]** Specifically, the data initiator open a data certificate opening application through the Second Service Party platform.

**[0076]** Wherein, the First Server platform and the Second Server platform can be the same server platform or different server platforms.

**[0077]** Further, the First Server platform and the Second Server platform can be an e-commerce platform, and the data requesting party may also access the e-commerce platform through an application installed in the smart terminal to initiate the initiation of the data request. The data initiator responds to the data request through the e-commerce platform to open the data certificate.

**[0078]** Step S42, the First Service Party opens an application to generate a corresponding first data certificate and a second data certificate according to the data certificate, and locks the first data in the data unit of the data initiator, the first data is equal to the first data value, and locks the second data in the data unit, the second data is equal to the first data value and sends the first data certificate and the second data certificate to Second Service Party.

**[0079]** Step S43, the Second Service Party receives the first data certificate and the second data certificate, adds the data value that is equal to the data size of the first data in the data unit of the first data requester, and adds the data value that is equal to the data size of the second data in the data unit of the second data requester. Wherein, the Second Service Party is set that the first data requester and the second data requester shall add data values equal to the data size of the first data and the second data to the data unit in the Second Service Party within a scheduled time.

**[0080]** The data interaction processing method in the example of the present invention is described below by way of example.

**[0081]** For example, the first data requester is User A1, the second data initiator is User A2, and the data initiator is User B. User B is an administrator for more than one client and has a corresponding password for each client for administrator privileges. Clients can be personal computers, tablets, smart phones and other devices that can exchange data with servers through the network. The User A1 initiates a first data request that needs the first data through the First Server platform, and the User A2 initiates, by using the First Server platform, a second data request that needs the second data. The first data is a password for requesting administrator rights of the Client 2, and the second data is a password for requesting administrator rights of the Client 5.

**[0082]** When receiving the first data request and the second data request, the User B requests the First Service Party to open the first data certificate and the second data certificate through the Second Server platform. Wherein, User B's administrator password is saved in the Second Service Party, and for each client, the corresponding administrator privileges have different levels of importance. For example, Client 1 is a corporate server, Client 2 is a tablet, Client 3 is a personal computer, Client 4 is a mobile phone, and Client 5 is a smart TV. Therefore, you need to set the importance level of the client's administrator privileges from high to low: Client 1, Client 3, Client 2, Client 4, Client 5. When User B agrees to give the administrator rights of Client 2 and 5 to User A1 and User A2, the corresponding data certificate is provided to the First Service Party. The data certificate may be an operation log when the User B manages the Client 2 and Client 2, so as to

prove the security and reliability of the User B.

**[0083]** When the First Service Party receives the data certificate submitted by the User B, the First Service Party blocks the administrator right of the User B on the Client 2 and Client 5 according to the relevant contents of the data certificate, that is, the User B can not use the corresponding password to manage the Client 2 and Client 5. At the same time, the Second Service Party sends the password of the administrator's right of the Client 2 and 5 to the User A1, A2 according to the data certificate sent by the First Service Party. And, the Second Service Party can set the time when User A1 returns the administrator authority of Client 2 and set the time when User A2 returns the administrator authority of Client 5. The two return periods can be the same or different. For example, the Second Service Party provider sets User A1 needs to return the administrator right of Client 2 to User B within a month, and return the administrator right of Client 5 to User B within four months.

**[0084]** When User A1 and A2 returns the administrator right of corresponding client to the Second Service Party within the specified time, the First Service Party unfreezes User B to administrator right of Client 2 and 5, and User A1 and A2 can no longer manage Client 2 and 5 using the corresponding password. When User A1 or/and A2 does not return the administrator authority of client to the Second Service Party at the specified time, the Second Service Party sends a notification to User A1 or/and A2 to prompt him to return the administrator's rights. If the Service Party does not receive the administrator rights of the client returned by the User A1 or/and A2 over a certain period of time, the User B's administrator rights on the Client 2 or/and 5 are completely cancelled.

**[0085]** In the above, when the User B (data initiator) receives a request from the User A1 and A2 (data requester) for obtaining the administrator authority password of the corresponding client, the First Service Party notifies the Second Service Party according to the data certificate submitted by the User B sends client's password to User A1 and A2. On the one hand, User B gives the administrator authority to User A1, A2 through the service side for risk control, and User B's data certificate is required as a guarantee that administrator rights will not be arbitrarily transferred. On the other hand, when User A1 and A2 fails to return the administrator rights on time, the server can notify User A1 and A2 to promptly return or cancel the User B's administrator rights so as to ensure that the client has only one administrator's authority so as not to cause the client's data Management confusion, and avoid the risk of client data security issues.

**[0086]** Further, the requested data may also be text data, audio data, video data, program data or financial data in the financial field. In the case of financial data, for an example, funds, the data requester is the borrower at this time, the data initiator is the lender of the loan, and the server is the Funds-Management server, for example, a bank. If it is audio data, such as a song, the data requester and the data initiator may be clients with multimedia playing functions such as mobile phones, and the server is a music website server.

**[0087]** Please refer to Figure 8, it is a data interaction processing method according to the second example of the present invention, the method and process including:

**[0088]** Step S50, the First Service Party receives the data certificate submitted by the data initiator according to the data request of the first data requester and the second data requester and opens the application. Wherein the first data request is a request from the first data requester to initiate the addition of the first data value to its data unit; the second data request is a request from the second data requester to initiate the addition of the second data value to its data unit

**[0089]** Specifically, the first data requester and the second data initiator initiate a first data request and a second data request through the First Server platform. The data initiator applies to the service party through the Second Server platform for opening a data certificate.

**[0090]** Wherein, the First Server platform and the Second Server platform can be the same server platform or different server platforms.

**[0091]** Further, the First Server platform and the Second Server platform can be an e-commerce platform, and the data requesting party may also access the e-commerce platform through an application installed in the smart terminal to initiate the initiation of the data request. The data initiator responds to the data request through the e-commerce platform to open the data certificate.

**[0092]** Step S51, opens an application to generate a corresponding first data certificate and a second data certificate according to the data certificate, and locks the first data in the data unit of the data initiator, the first data certificate is equal to the first data value, and locks the second data is equal to the second data value, and sending the first data certificate and the second data certificate to Second Service Party.

**[0093]** Step S52, send the first data certificate and the second data certificate to the Second Service Party, after the Second Service Party receives the first data certificate and the second certificate, the Second Service Party adds the data value equal to the first data size to the first data

requester data unit and adds the data value equal to the second data size to the second data requester data unit. Wherein, the Second Service Party is set that the first data requester and the second data requester shall add data values equal to the data size of the first data and the second data to the data unit in the Second Service Party within a scheduled time.

**[0094]** Please refer to Figure 9, it is a data interaction processing method according to a third example of the present invention. The method and process shown in this example includes:

**[0095]** Step S60, the Second Service Party receives the first data certificate and the second data certificate. Wherein the first data certificate is generated by the First Service Party after receiving the data certificate open application submitted by the second data initiator according to the first data request; the second data certificate is generated by the First Service Party after receiving the data certificate open application submitted by the second data initiator according to the data request; the first data request is initiated by the data requester and needs to add the first data value to the data unit; the second data request is initiated by the data requester and needs to add the second data value to the data unit.

**[0096]** Step S61, adds the data value equal to the data size of the first data in the data unit of the first data requester and add data value equal to the second data size in the data unit of the second data requester respectively. Wherein, the Second Service Party is set that the first data requester and the second data requester shall add data values equal to the data size of the first data and the second data to the data unit in the Second Service Party within a scheduled time.

**[0097]** Please refer to Figure 10 and 11, it is a schematic diagram of a data interaction processing system according to an example of the present invention. The System 70 shown in this example includes a first data request Terminal 71, a second data request Terminal 72, a data initiating Terminal 73, a First Server 74, and a Second Server 75.

**[0098]** This first data request Terminal 71 is used to initiate a first data request that needs to add a first data value to its data unit.

**[0099]** This second data request Terminal 72 is used to initiate a second data request that needs to add a second data value to its data unit.

**[0100]** Wherein, the first data request Terminal 71 and the second data request Terminal 72 initiate a first data request of the first data through the First Server platform.

**[0101]** The data initiating Terminal 73 is configured to receive the first data request and the second data request and submit a data certificate opening application.

**[0102]** Specifically, the data initiator terminal 72 opens the data certificate to the first server 73 through the Second Server platform.

**[0103]** Wherein, the First Server platform and the Second Server platform can be the same server platform or different server platforms.

**[0104]** Further, the First Server platform and the Second Server platform can be an e-commerce platform, and the first data request Terminal 71 and the second data request terminal 72 may also access the e-commerce platform through an application installed in the smart terminal to initiate the initiation of the data request. The data initiator Terminal 73 responds to the data request through the e-commerce platform to open the data certificate.

**[0105]** The First Server 74 is configured to generate a corresponding first data certificate and a second data certificate according to the data certificate, and lock the first data equal to the first data value in the data unit of the data initiating terminal 73 and the second data equal to the second data value.

**[0106]** The Second Server 75 is used to receive the first data certificate and the second data certificate, and adds a data value equal to the first data size in the data unit of the first data request Terminal 71 and adds a data value equal to the second data size in the data unit of the second data request Terminal 72. Wherein the Second Server 75 is set to add data values equal to the first data size and the second data size to the data unit of the first data request Terminal 71 and the second data request Terminal 72 in the Second Server 75 within a scheduled time.

**[0107]** Please refer to Figure 12, which is a data interaction processing device according to a first example of the present invention. The data interaction processing Device 80 shown in this example includes a receiving module 81, a processing module 82, and a releasing module 83. In the present example, the Device 80 operates in a banking system.

**[0108]** The receiving module 81 is configured to receive an application for establishing a data certificate submitted by a data initiator according to a first data request and a second data request from a data requester. Wherein the first data request is a request from the first data requester to initiate the addition of the first data value to its data unit; the second data request is a request from the second data requester to initiate the addition of the second data value to its data unit

**[0109]** Specifically, the data certificate receiving module 81 receives the data certificate opened by the first data initiator terminal through a server platform.

**[0110]** The processing module 82 opens an application corresponding to the data certificate to

generate a corresponding first data certificate and a second data certificate, and locks the data in the data unit of the first data initiator equal to the data value represented by the first data certificate. A data and a second data that is locked in the data unit of the second data initiator and is equal to the data value represented by the second data certificate, and sends the first data certificate and the second data certificate to the Second Service Party

**[0111]** The issuing module 83 is used to send the first data certificate and the second data certificate to the Second Server, after the Second Server receives the first data certificate and the second data certificate, adds the data value equal to the first data size and the second data size to the data requester data unit respectively. Wherein, the Second Service Party is set that the first data requester and the second data requester shall add data values equal to the data size of the first data and the second data to the data unit in the Second Service Party within a scheduled time.

**[0112]** Please refer to Figure 13, it is a data interaction processing apparatus according to a second example of the present invention. The data interaction processing apparatus 90 shown in this example includes a receiving module 91 and an issuing module 92. In the present example, the Device 90 operates in a banking system.

**[0113]** The receiving module 91 is configured to receive the first data certificate and the second data certificate. Wherein the first data certificate is generated by the First Service Party after receiving the data certificate open application submitted by the second data initiator according to the first data request; the second data certificate is generated by the First Service Party after receiving the data certificate open application submitted by the second data initiator according to the data request; the first data request is initiated by the data requester and needs to add the first data value to the data unit; the second data request is initiated by the data requester and needs to add the second data value to the data unit.

**[0114]** The issuing module 92 is used to add a data value equal to the first data size and the second data size to the data request terminal data unit. Wherein, the Second Service Party is set that the first data requester and the second data requester shall add data values equal to the data size of the first data and the second data to the data unit in the Second Service Party within a scheduled time.

**[0115]** In the data interaction processing method, the data interaction system, and the data processing device provided by the present invention, when a data initiator initiates a data request that needs to add a value to a data unit thereof after receiving a data request from the first data

requester and the second data requester, the First Service Party opens the data certificate according to the request of the data initiator and locks the corresponding first data and second data so that the Second Service Party adds the value of the first data and the second data to the first data requester and the second data requester according to the data certificate and requests the first data requester and the second data requester to add the value of the first data and the second data to the Second Service Party data unit within a predetermined time. Therefore, during the process of data exchange, the First and the Second Service Party are added into the interaction process. After the data initiator sends the server for credit guarantee, the server becomes the actual data issuer, so that the data interaction is more conveniently and safely handled.

**[0116]** A person of skill in the art considers the problems disclosed herein and sought to be solved by the present disclosure to be exclusively computer problems and contemplates only solutions to those problems that include essential computer elements. Abstract ideas, mere schemes, plans, rules, or mental processes that do not include computer elements are expressly excluded from this application.

**[0117]** In the above examples, the present invention has been exemplary described only, but various modifications to the present invention can be made by those skilled in the area after reading this patent application without departing from the spirit and scope of the present invention.

Claims:

1. A computer implemented method for secure data processing:

receiving a first data certificate and a second data certificate from a first service party, wherein the first data certificate and the second data certificate are generated by the first service party according to at least a first data certificate application submitted by a data initiator, wherein the at least a first data certificate application corresponds to a first data request for a first value of data from a first data requesting data unit of a first data requester and a second data request for a second value of data from a second data requesting data unit of a second data requester, wherein the first value of data in a data unit of a first server platform and the second value of data in the data unit of the first server platform are locked concurrently;

adding data equal to the first value of data to the first data requesting data unit from a data issuer and data equal to the second value of data to the second data requesting data unit from the data issuer;

setting a first predetermined time for the first data requester to add data equal to the first value of data to a data unit of a second server platform and a second predetermined time for the second data requester to add data equal to the second value of data to the data unit of the second server platform; and

wherein the second server platform is the data issuer of the first data request and the second data request.

2. The method of claim 1, wherein the first data request and the second data request are initiated by the first data requester and the second data requester through a first server platform.

3. The method of any one of claims 1 to 2, wherein the first data certificate and the second data certificate are generated by the data initiator through the second server platform.
4. The method of any one of claims 2 to 3, wherein the first server platform and the second server platform are the same server platform.
5. The method of any one of claims 2 to 3, wherein the first server platform and the second server platform are different server platforms.
6. The method of any one of claims 2 to 5, wherein the first server platform and the second server platform both are electronic commerce platforms.
7. The method of claim 6, wherein the first data requester and the second data requester access the electronic commerce platform through an application installed in a smart terminal to initiate the data requests.
8. The method of claim 6 or 7, wherein the data initiator responds to the first data request and the second data request through the electronic commerce platform to generate the first data certificate and the second data certificate.
9. The method of any one of claims 1 to 8, wherein data in the first data request and the second data request refers to text data.
10. The method of any one of claims 1 to 8, wherein data in the first data request and the second data request refers to audio data.
11. The method of any one of claims 1 to 8, wherein data in the first data request and the second data request refers to video data.
12. The method of any one of claims 1 to 8, wherein data in the first data request and the second data request refers to program data.

13. The method of any one of claims 1 to 8, wherein data in the first data request and the second data request refers to financial data in a financial field.
14. The method of any one of claims 1 to 13, wherein the first predetermined time and the second predetermined time are pre-set to the same date.
15. The method of any one of claims 1 to 13, wherein the first predetermined time and the second predetermined time are pre-set to different dates.

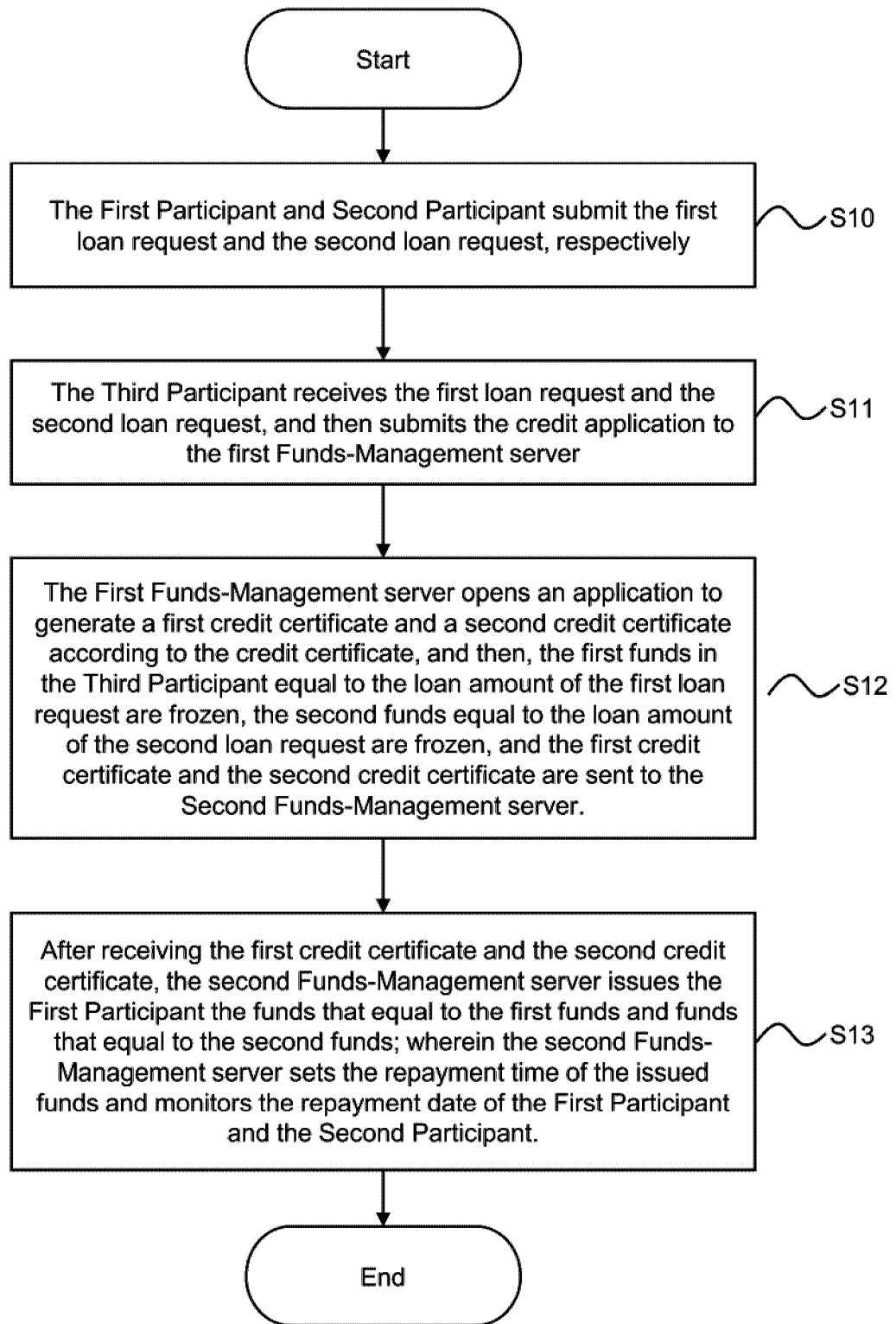


Figure 1

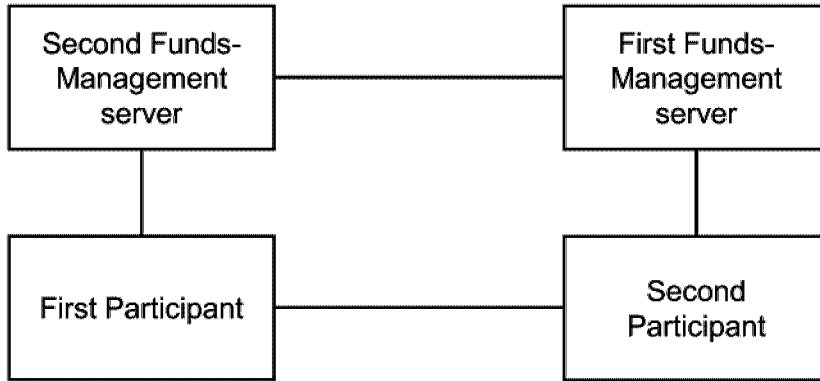


Figure 2

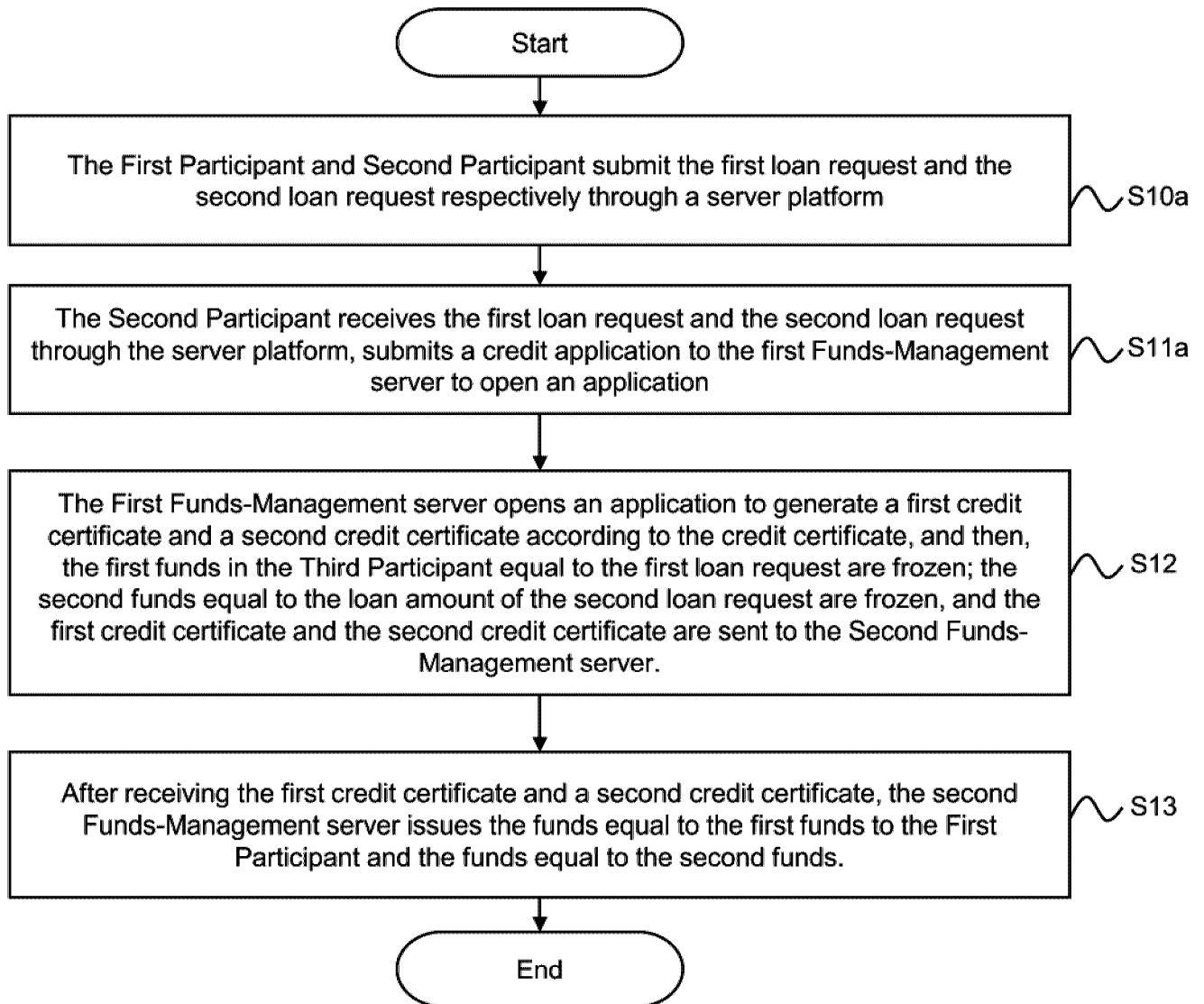


Figure 3

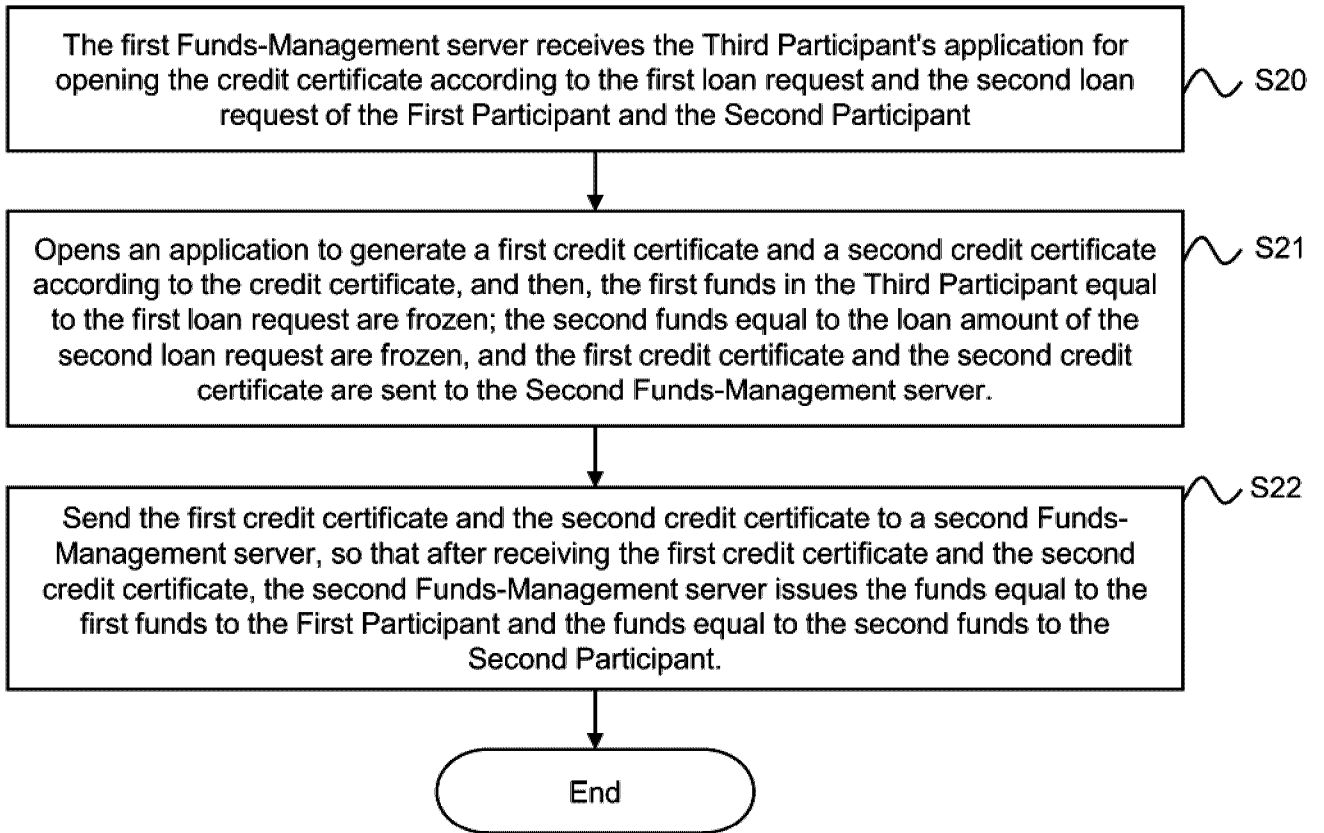


Figure 4

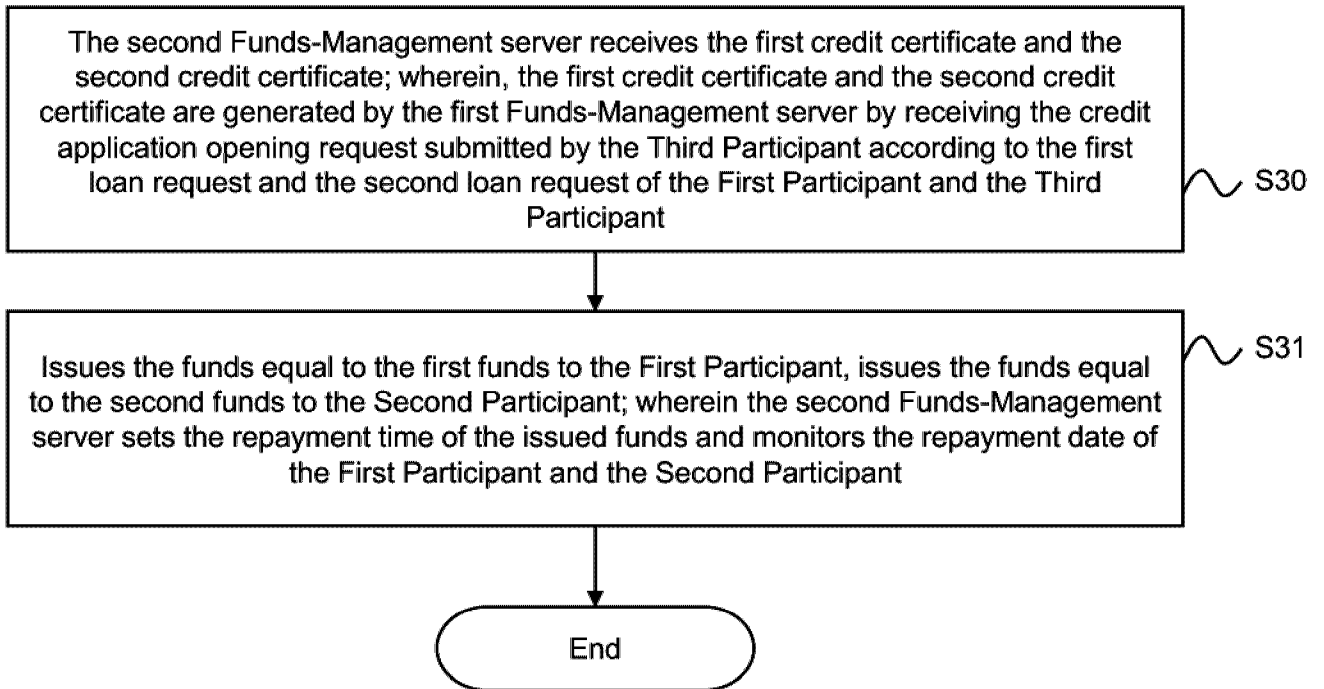


Figure 5

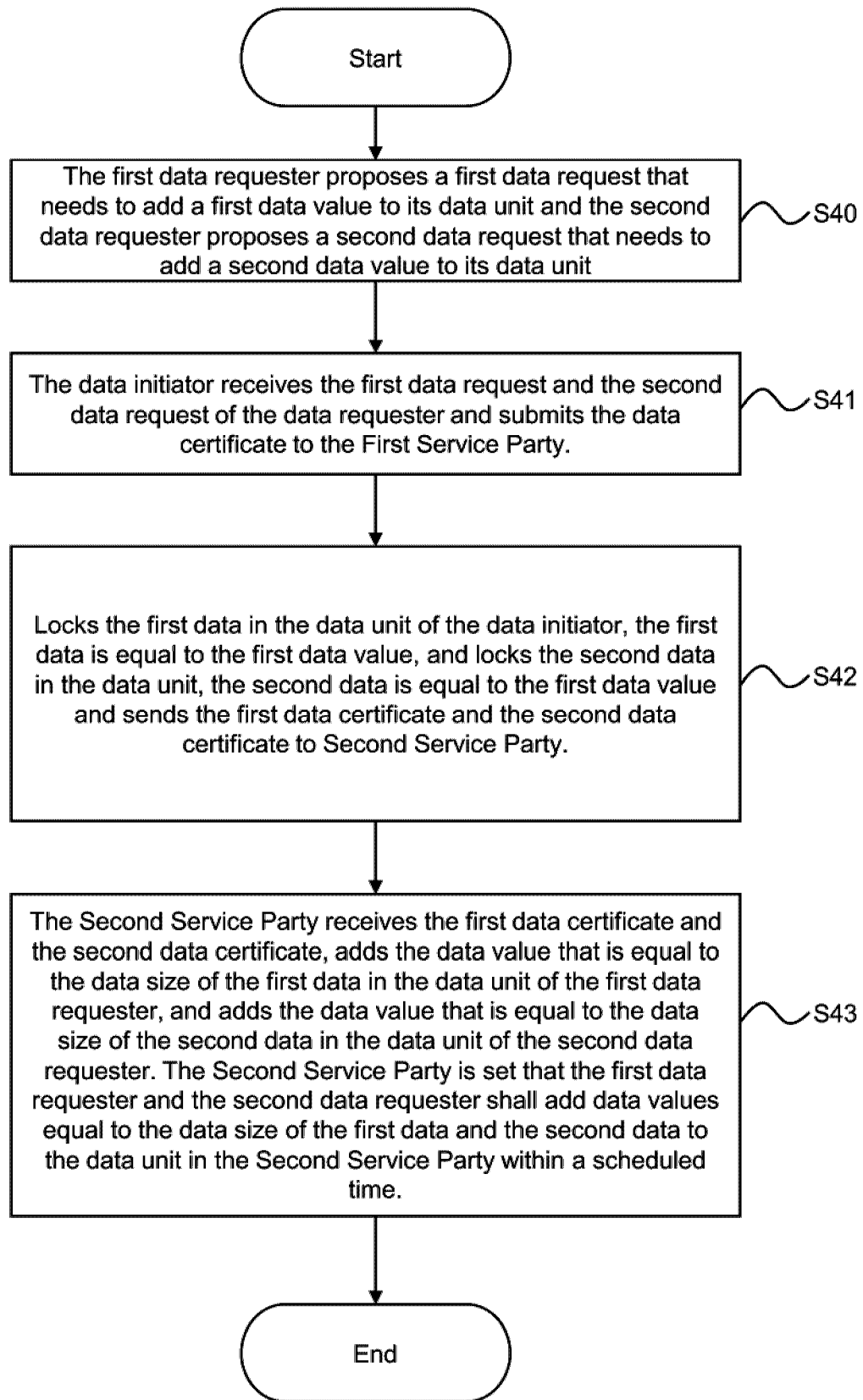


Figure 6

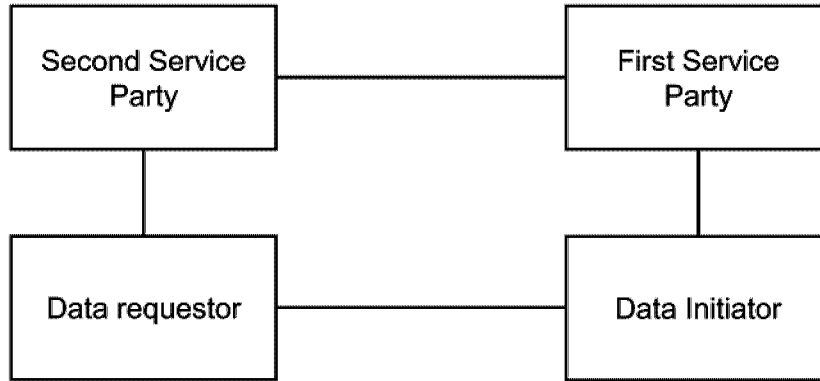


Figure 7

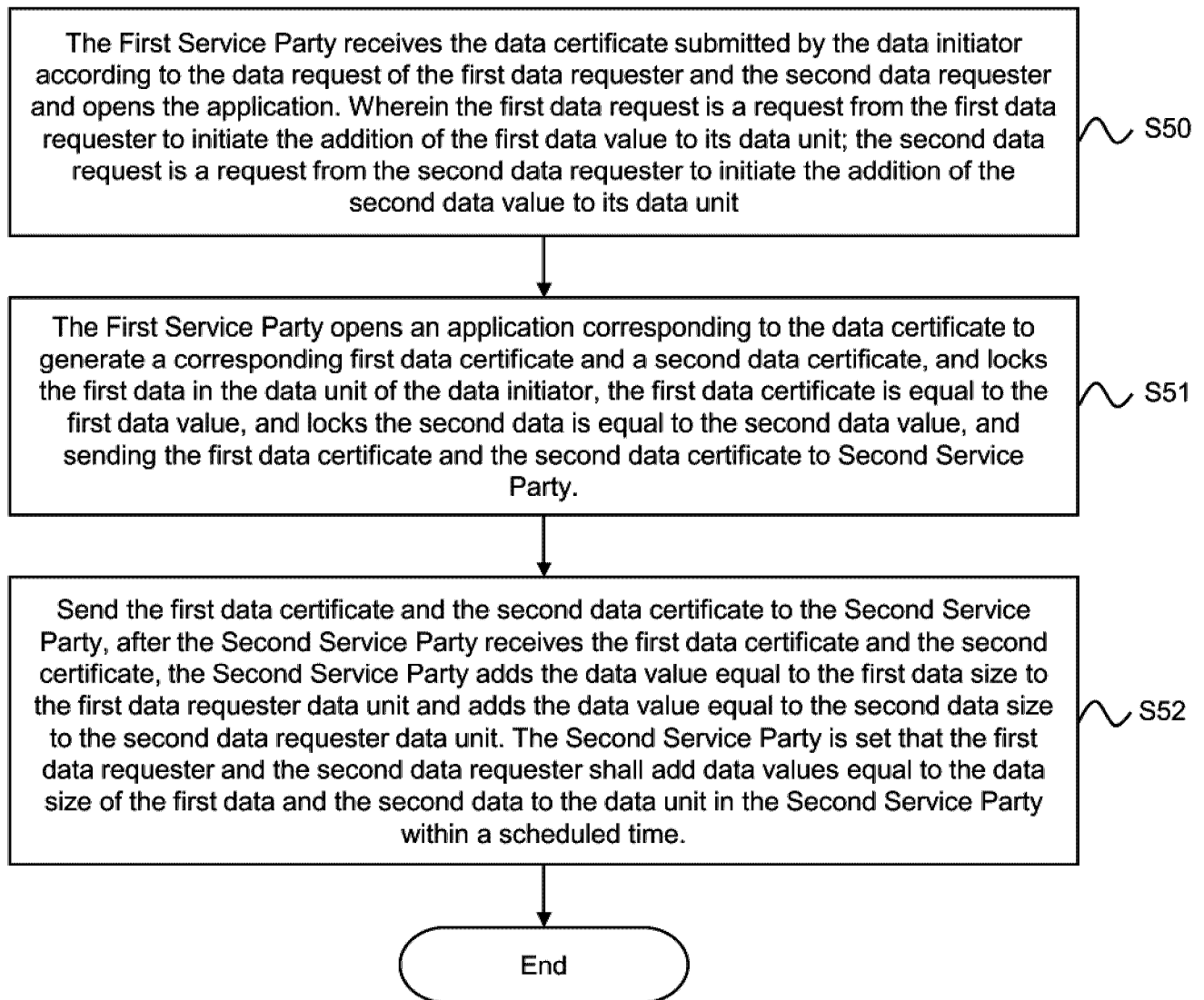


Figure 8

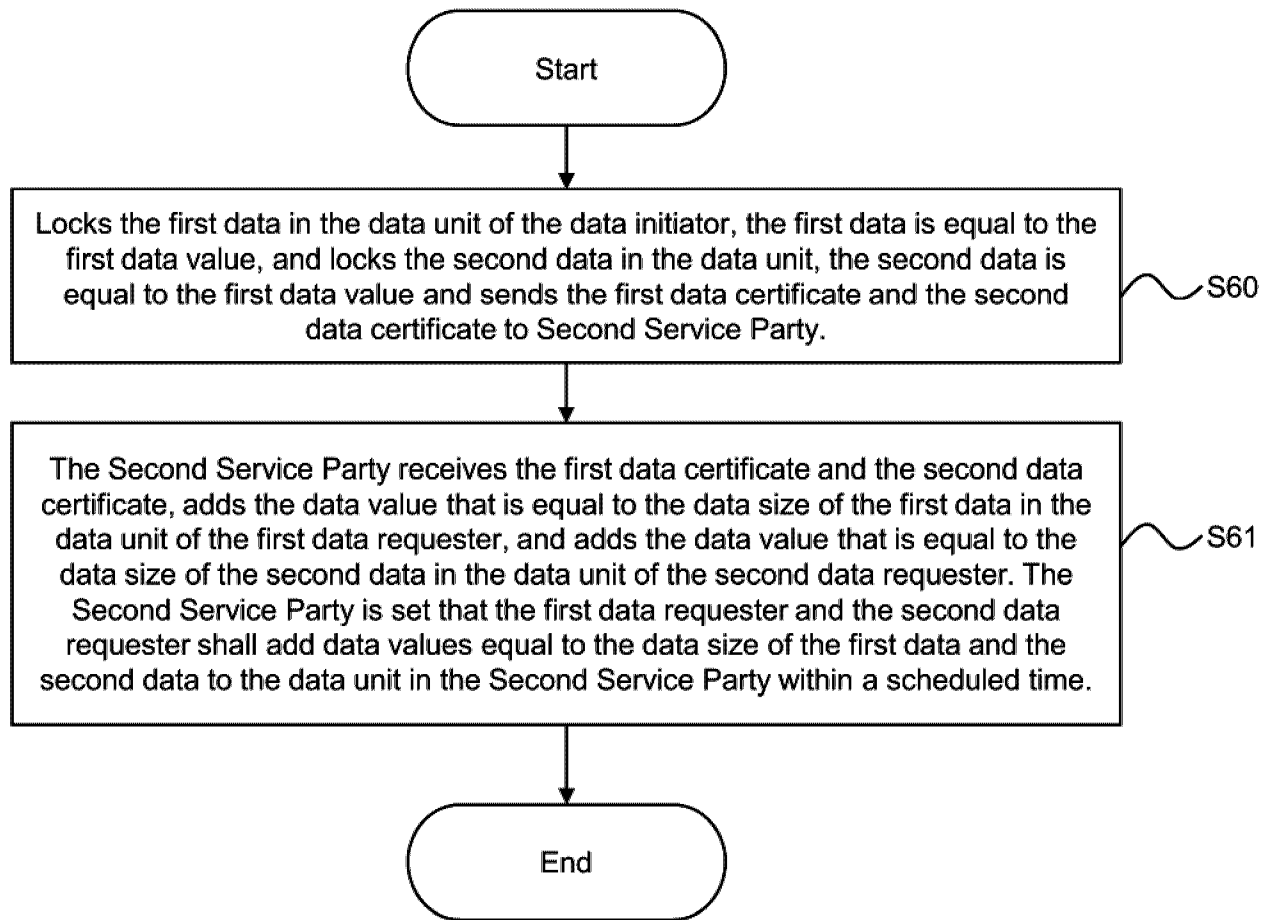


Figure 9

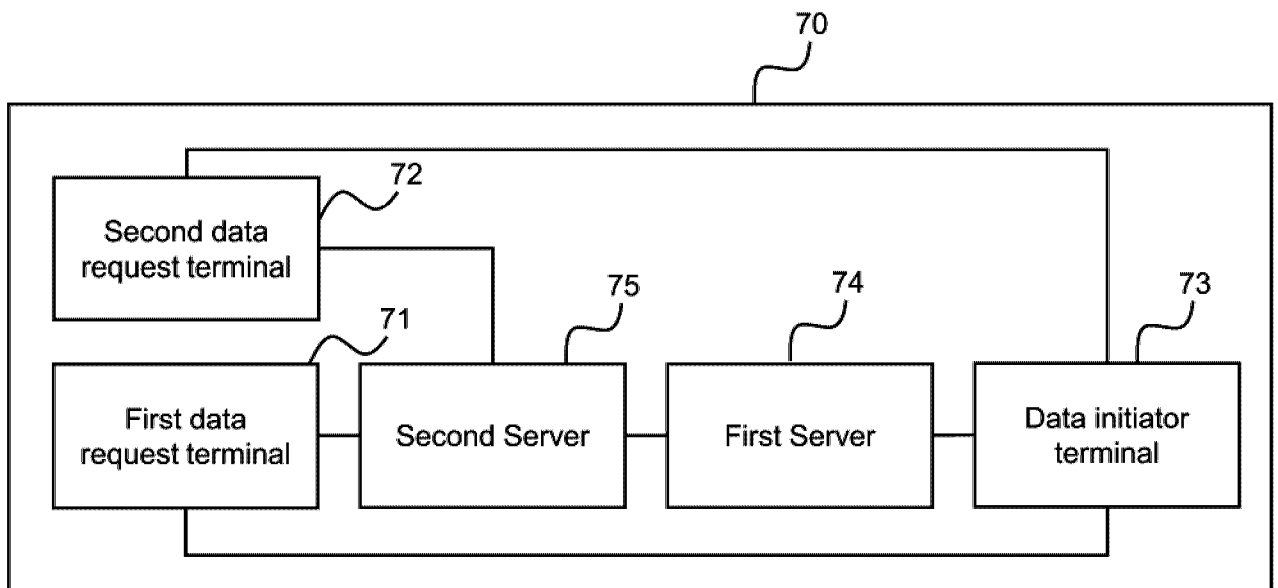


Figure 10

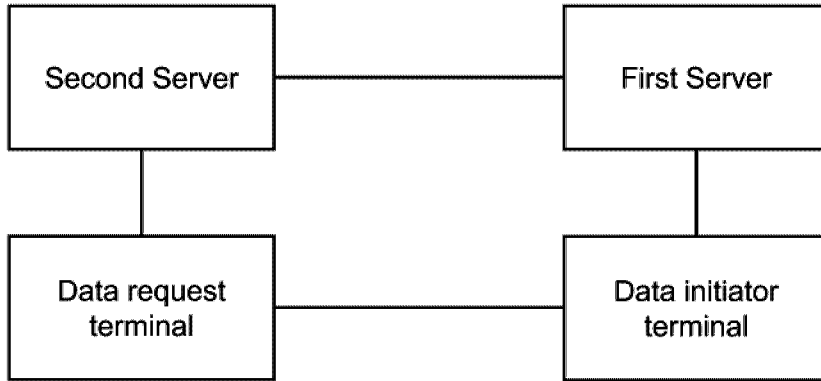


Figure 11

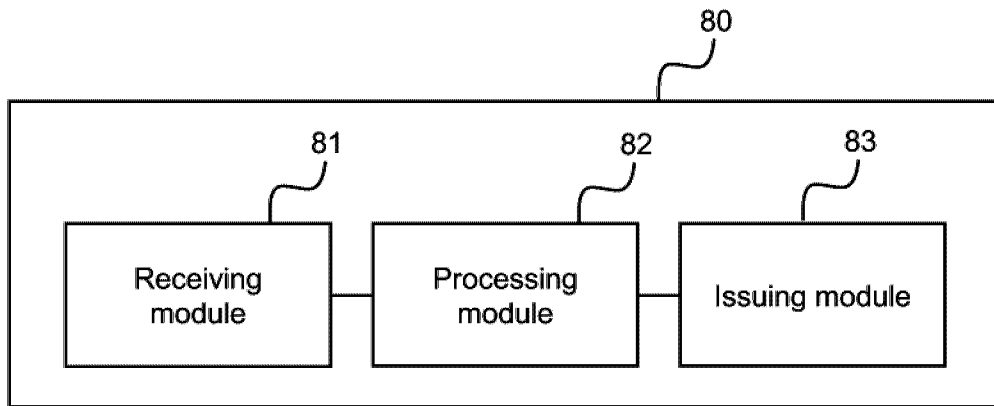


Figure 12

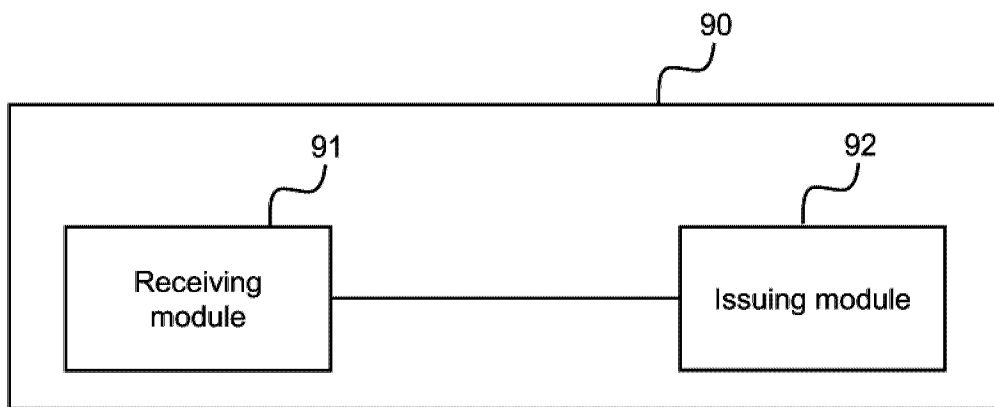


Figure 13

