Description

SYSTEM FOR MEDIATING PREPAYMENT IDENTIFICATION DATA AND METHOD THEREOF

Technical Field

[1] The present invention relates to a technology which provides a relay server between a plurality of Point-Of-Sale (POS) terminals and a plurality of issuance servers, so that the identification data of prepaid cash and the identification data of prepaid cards are relayed, thereby reducing the complexity of a system and reducing the distribution costs for the prepaid card.

[2]

Background Art

[3] Generally, prepaid cards have been commonly used as cards which allow users to pay a predetermined amount of money and purchase one of them, and then to receive charged services by paying predetermined goods, such as a telephone card, an Internet game card and a gift certificate, or relevant services corresponding to the goods within the paid amount of money. With regard to such a prepaid card, the type and amount of remaining money on the prepaid card are read by a POS terminal based on a pre-determined display area (generally, corresponding to a bar-code) printed on the front or rear surface of the prepaid card, in particular, using a method of completing the sale of an activated (available) prepaid card based on the identification number of a purchased prepaid card, which is read by the bar-code reader of a POS terminal located in a store.

[4] However, with regard to the method using a system for identifying a prepaid card, since a POS terminal only performs a function of selling prepaid cards to users, a problem occurs in that it is difficult to manage a plurality of sold prepaid cards and stock, and, since the prepaid cards cannot be prevented from being stolen and lost, another problem occurs in that the security of the system is weak.

[5]

Disclosure of Invention

Technical Problem

[6] Accordingly, the present invention has been made keeping in mind the above problems occurring in the prior art, and an object of the present invention is to provide a relay server between a plurality of POS terminals and a plurality of issuance servers, so that the complexity of a system is reduced and non-issued prepaid cash and in-activated prepaid cards are prevented from being stolen, and that the distribution costs for the prepaid cards are reduced through the issuance of prepaid cash in the form of a receipt.

[7]

Technical Solution

[8] In order to accomplish the above object, the present invention provides a system for relaying prepayment identification data, including a relay server for generating issuance information for the identification data of prepaid cash, which is received from at least one Point-Of-Sale (POS) terminal, and then transmitting the issuance results based on the identification data to the POS terminal; and at least one issuance server for updating the identification data of the issued prepaid cash using the issuance results received from the relay server.

[9]

Advantageous Effects

[10] According to the present invention, a relay server relays the transmission and reception of the identification data of prepaid cash and prepaid cards between a plurality of POS terminals and a plurality of issuance servers, so that the complexity of a system can be reduced, and the registration of sale is completed using the POS terminals, so that non-issued prepaid cash and inactivated prepaid cards are prevented from being stolen.

[11] Further, there is an advantage in that production costs, stocking costs, and distribution costs for prepaid cards can be reduced through the issuance of prepaid cash in the form of a receipt.

[12]

Brief Description of the Drawings

[13] FIG. 1 is a view showing a system for relaying identification data according to a first embodiment of the present invention;

[14] FIG. 2 is a view showing the flow of identification data in the case in which an issuance server is different from a service provider for a charged service according to the first embodiment of the present invention;

[15] FIG. 3 is a view showing a method of relaying identification data according to the first embodiment of the present invention;

[16] FIG. 4 is a view showing a method of relaying identification data in the case in which an issuance server is different from a service providing server for a charged service according to the first embodiment of the present invention;

[17] FIG. 5 is a view showing a system for relaying identification data according to a second embodiment of the present invention;

[18] FIG. 6 is a view showing a method of relaying identification data according to the second embodiment of the present invention;

[19] FIG. 7 is a view showing a method of relaying identification data in the case in

which an issuance server is different from a service providing server for a charged service according to the second embodiment of the present invention;

[20] FIG. 8 is a view showing a system for relaying identification data based on issuance cancellation and activation cancellation according to a third embodiment of the present invention; and

[21] FIG. 9 is a view showing a method of relaying identification data based on issuance cancellation and activation cancellation according to the third embodiment of the present invention.

[22]

Mode for the Invention

[23] The detailed features and advantages of the present invention will be clearly understood through the embodiments of the present invention below with reference to the attached drawings. Terms and words used in the present specification and claims should be interpreted as having meanings and concepts in conformity with the technical spirit of the present invention based on the principle by which an inventor can appropriately define the concepts of terms in order to describe the inventor's own invention in the most appropriate way. Further, it should be noted that, when it is determined that the detailed descriptions of well-known functions and configurations related to the present invention would obscure the gist of the present invention, they are omitted.

[24] Referring FIG. 1, a system 'S' for relaying identification data according to the present invention includes at least one POS terminal 100 provided in at least one store from among dispersed stores (for example, convenience stores) and configured to read the identification data of prepaid cash, a relay server 200 configured to receive the identification data of the prepaid cash from the POS terminal and transmit it to a relevant issuance server, and to transmit issuance results depending on the identification data (hereinafter, referred to as 'issuance results') to the POS terminal, and at least one issuance server 300 configured to perform issuance based on the identification data received from the relay server and to transmit the issuance results depending on the identification data to the relay server.

[25] Although not mentioned below, it will be assumed that the transmission and reception of data between the POS terminal 100, the relay server 200 and the issuance server 300 are performed over an information and communication network, preferably, over an Internet network.

[26] In particular, when a user requests to purchase prepaid cash, the POS terminal 100 transmits the identification data of prepaid cash to the relay server 200 so that the prepaid cash is issued, receives issuance results for the corresponding prepaid cash

from the relay server, and then completes the sale of the prepaid cash.

[27] The identification data is read through scan means or key input means provided at the POS terminal, and the 'identification data' includes the identification number and issuance company information of prepaid cash. Here, it is assumed that the issuance company information is information used to distinguish an issuance company which issued the relevant prepaid cash, and it can be considered that the prepaid cash which has been sold is output in the form of a receipt through the POS terminal.

[28] Therefore, the relay server 200 which receives the identification data includes issuance company identification means 210 for identifying issuance company information, an issuance DB 220, and issuance means 230. With regard to the relay server, the issuance company identification means 210 reads issuance company information based on the identification data previously stored in the issuance DB 220, and the issuance means 230 generates issuance information for the received identification data with reference to the issuance company information and then updates the issuance DB.

[29] Here, the 'issuance information' can be understood as information used in a process of allowing prepaid cards to be sold to users. The issuance results for the process are transmitted to the POS terminal and the issuance server 300.

[30] Meanwhile, the issuance server 300 receives the issuance results from the relay server 200, updates identification data previously stored in the issuance result DB 310, receives a request for a charged service, that is, a predetermined service (for example, an online game or an Internet telephone), by a user terminal 400, and provides the charged service to the user terminal.

[31] Further, the user terminal 400 receives the identification data (preferably, the identification number) of the prepaid cash, which has been purchased, from the user, requests a charged service from the corresponding issuance server 300, and then receives the corresponding service from the issuance server.

[32] The issuance server 300 is configured to receive a request by the user and then directly provide a relevant service. However, in the case in which the issuance server 300 is different from a service provider, a service providing server 500 provides a charged service as shown in FIG. 2.

[33] In detail, the service providing server 500 receives identification data from the user terminal 400 and then transmits the identification data to the issuance server 300. The issuance server approves the corresponding identification data with reference to the issuance result DB 310, and then transmits the approval results thereof to the service providing server.

[34] Thereafter, the service providing server provides a charged service to the user terminal.

[35] The method of relaying identification data according to the first embodiment of the present invention will be described below.

[36] Referring to FIG. 3, the POS terminal 100 transmits the identification data of prepaid cash requested to be purchased by a user to the relay server 200 over an information and communication network at step S110.

[37] The relay server 200 which received the identification data reads issuance company information included in the identification data at step S120, generates issuance information for the identification data based on the read issuance company information at step S130, and then transmits issuance results based on the identification data to the POS terminal 100 and the issuance server 300 at step S140. Thereafter, the POS terminal completes the sale by outputting the prepaid cash in the form of a receipt, and the issuance server 300 updates the identification data for the corresponding prepaid cash in the issuance result DB 310 at steps S150 and S160.

[38] The user, who purchased the prepaid cash through the above-described series of steps S110 to S160, receives a relevant service through the user terminal 400 later. With regard to this, the user terminal transmits the identification data (preferably, the identification number) of prepaid cash to the issuance server 300 so as to receive a charged service at step S170 (Request for a charged service). The issuance server approves the identification data if the identification data has been issued with reference to the issuance result DB 310 and at step S170, and then provides the corresponding charged service to the user terminal at steps S180 and S190.

[39] Meanwhile, with regard to the provision of a charged service in the case in which the issuance server is different from the service providing server, as shown in FIG. 4, the user terminal 400 transmits the identification data of prepaid cash to the service providing server 500 first at step S210, and the service providing server 500 transmits it to the issuance server at step S220.

[40] When the received identification data is activated, the issuance server 300 approves the identification data, and then transmits the approval results to the service providing server 500 at steps S230 and S240. Thereafter, the service providing server provides the charged service requested by the user to the user terminal 400 at step S250.

[41] A second embodiment of the present invention will be described below. Although the system for relaying identification data according to the second embodiment is based on the system according to the first embodiment, the configuration thereof is different from that of the first embodiment as shown in FIG. 5.

[42] That is, in the first embodiment, the identification data of prepaid cash is relayed and issued by the relay server, the prepaid cash is output in the form of a receipt through the POS terminal based on the issuance results, and then the sale of the prepaid cash is completed. Meanwhile, in the second embodiment, the identification data of a real-type

prepaid card is relayed and activated, and the activated prepaid card is sold through the POS terminal based on the activation results.

[43] The system for relaying identification data includes at least one POS terminal 100 for reading the identification data of a prepaid card, a relay server 200 for receiving the identification data of the prepaid card from the POS terminal and transmitting it to an issuance server, and transmitting the results (hereinafter referred to as 'activation results') based on the identification data to the POS terminal, and at least one issuance server 300 for performing activation based on the identification data received from the relay server, and transmitting the activation results based on the identification data to the relay server.

[44] In particular, when a user requests to purchase a prepaid card, the POS terminal 100 transmits the identification data of the prepaid card to the relay server 200 so as to activate the prepaid card, receives the activation results for the corresponding prepaid card from the relay server, and then completes the sale of the prepaid card.

[45] The relay server 200 includes issuance company identification means 210 for identifying issuance company information, activation means 240, and an activation DB 250. With regard to the relay server, the issuance company identification means 210 reads issuance company information and issuance information based on identification data previously stored in the activation DB 220, and the activation means 240 generates activation information for the received identification data with reference to the read issuance company information and issuance information, and then updates the activation DB 250. Here, the 'activation information' can be considered to be information used for a process of allowing the user to use the prepaid card, and the activation results for the process are transmitted to the POS terminal.

[46] Meanwhile, the issuance server 300 receives the activation results from the relay server 200, and updates identification data previously stored in the activation result DB 320. The user terminal 400 receives the identification data (preferably, the identification number) of an activated prepaid card from the user, requests a charged service from the issuance server 300, and then receives the corresponding charged service.

[47] Further, the user can receive a charged service through a service providing server 500 other than the issuance server 300, and this will be described below.

[48] In particular, the service providing server 500 receives identification data from the user terminal 400 and transmits it to the issuance server 300. The issuance server approves the corresponding identification data with reference to an activation result DB 320, and transmits the approval results to the service providing server. The service providing server provides the charged service to the user terminal.

[49] A method of relaying identification data according to the second embodiment of the

invention will be described below.

[50] Referring to FIG. 6, the POS terminal 100 transmits the identification data of a prepaid card requested to be purchased by a user to the relay server 200 over an information and communication network at step S310.

[51] The relay server 200, which received the identification data of the prepaid card, reads issuance company information included in the identification data at step S320, generates activation information for the identification data based on the read issuance company information at step S330, and then transmits the activation results based on the identification data to the POS terminal and the issuance server 300 at step S340.

[52] Thereafter, the POS terminal completes the sale of the activated prepaid card, and the issuance server 300 updates the identification data for the corresponding prepaid card in the activation result DB 320 at steps S350 and S360.

[53] The user, who purchased the prepaid card through the above-described series of steps S310 to S360, receives the corresponding service later through the user terminal 400. With regard to this, the user terminal transmits the identification data (preferably, the identification number) of a prepaid card to the issuance server 300 so as to receive a charged service at step S370 (Request for a charged service). When the identification data is issued at step S370, the issuance server approves the identification data with reference to the issuance result DB 310, and provides the corresponding charged service to the user terminal at steps S380 and S390.

[54] Meanwhile, with regard to the provision of a charged service in the case in which the issuance server is different from the service providing server as shown in FIG. 7, the user terminal 400 transmits the identification data of a prepaid card to the issuance server 300 first at step S410, and the service providing server 500 transmits the identification data of the prepaid card to the issuance server at step S420.

[55] When the received identification data is activated, the issuance server 300 approves the identification data, and then transmits the approval results to the service providing server 500 at steps S430 and S440. Thereafter, the service providing server provides the charged service requested by the user to the user terminal 400 at step S450.

[56] A third embodiment of the present invention will be described below. Although a system for relaying identification data according to the third embodiment is based on the systems according to the first and second embodiments, the system relates to a process of canceling issuance results and activation results for issued and activated identification data.

[57] Referring to FIG. 8, a system for relaying identification data includes at least one POS terminal 100 for reading the identification data of prepaid cash and a prepaid card, a relay server 200 for receiving the identification data from the POS terminal and transmitting it to an issuance server, and transmitting issuance cancellation results or

activation cancellation results to the POS terminal, and at least one issuance server 300 for canceling issuance or activation based on the identification data received from the relay server, and then transmitting the issuance cancellation results and activation cancellation results to the relay server.

[58] In particular, when a user requests to cancel the purchase of prepaid cash or a prepaid card, the POS terminal 100 transmits relevant identification data to the relay server 200, receives prepaid cash cancellation results or prepaid card cancellation results from the relay server, and then completes the cancellation of sale.

[59] The relay server 200, which receives the identification data, includes issuance company identification means 210 for identifying issuance company information. The relay server reads issuance company information included in the identification data using the issuance company identification means 210, and then transmits the identification data to the issuance server 300 corresponding to the read issuance company information.

[60] Meanwhile, the issuance server 300 includes an issuance result DB 310, an activation result DB 320, and sale cancellation means 330. The issuance server receives identification data from the relay server, and transmits issuance cancellation results or activation cancellation results based on the received identification data to the relay server.

[61] A plurality of pieces of identification data of issued prepaid cash is previously stored in the issuance result DB 310, and a plurality of pieces of identification data of activated prepaid cards is stored in the activation result DB 320.

[62] The sale cancellation means 330 cancels issuance or activation for the identification data received from the relay server, updates the issuance cancellation results in the issuance result DB 310, and updates the activation cancellation results in the activation result DB 320.

[63] A method of relaying identification data according to the third embodiment of the present invention will be described below. Referring to FIG. 9, the POS terminal 100 transmits the identification data of a prepaid card, the purchase of which is requested to be cancelled by a user, to the relay server 200 at step S510.

[64] The relay server 200 which received the identification data reads issuance company information included in the identification data, and transmits the identification data to the corresponding issuance server 300 based on the read issuance company information at steps S520 and S530.

[65] Thereafter, the issuance server 300 cancels issuance or activation of the identification data received from the relay server, updates the issuance cancellation results in the issuance result DB 310, and updates the activation cancellation results in the activation result DB 320 at steps S540 and S550, the issuance cancellation results and the

activation cancellation results being based on the identification data.

[66] The relay server 200 receives the issuance cancellation results or the activation cancellation results from the issuance server, and then transmits them to the POS terminal 100. The POS terminal completes the cancellation of the sale of the corresponding prepaid cash or prepaid card based on the received issuance cancellation results or the activation cancellation results at steps S560 and S570.

[67] Although the preferred embodiments of the present invention have been disclosed in order to illustrate the technical spirit of the present invention, the present invention is not limited to the illustrated and described configurations and operations and those skilled in the art will appreciate that various modifications and variations are possible, without departing from the scope of the spirit of the present invention. Therefore, the appropriative modifications, variations, and equivalent elements of the present invention should be considered as included within the scope of the present invention.

Claims

[1] A system for relaying prepayment identification data, comprising:
a relay server for generating issuance information for identification data of prepaid cash, which is received from at least one Point-Of-Sale (POS) terminal, and then transmitting issuance results based on the identification data to the POS terminal; and
at least one issuance server for updating the identification data of the issued prepaid cash using the issuance results received from the relay server.

[2] The system according to claim 1,
wherein the relay server comprises:
issuance company identification means configured to identify an issuance company for the identification data received from the POS terminal;
an issuance Database (DB) configured to previously store the identification data; and
issuance means configured to generate the issuance information for the identification data received from the POS terminal with reference to the issuance DB and update the issuance DB, and to transmit the issuance results based on the received identification data to the POS terminal and the issuance server, and
wherein the issuance server receives the issuance results from the relay server, and then updates the identification data previously stored in the issuance result DB.

[3] The system according to claim 1, wherein the issuance server provides a charged service to a user terminal, which transmitted the identification data of the prepaid cash which has been purchased, based on the issuance results.

[4] The system according to claim 1, wherein the identification data comprises an identification number and issuance company information of the prepaid cash.

[5] The system according to claim 1, wherein the prepaid cash is output in a receipt form by the POS terminal.

[6] The system according to claim 1,
wherein the relay server comprises issuance company identification means capable of identifying issuance company information from the identification data, the identification data being received along with a purchase cancellation request for the prepaid cash issued based on the issuance results, both being received from the POS terminal, and transmits the identification data to an issuance server corresponding to issuance company information read using the issuance company identification means, the identification data being received along with the purchase cancellation request, and

wherein the issuance server comprises:
an issuance result DB configured to previously store the identification data; and
sale cancellation means configured to cancel issuance of the identification data received from the POS terminal with reference to the issuance result DB, the identification data being received along with the purchase cancellation request, and updates issuance cancellation results based on the identification data in the issuance result DB.

[7] A method of relaying prepayment identification data, the method being applied to a system for relaying prepayment identification data, the system including at least one POS terminal, at least one issuance server, and a relay server, the method comprising:
a first step of the relay server reading issuance company information included in identification data received from the POS terminal; and
a second step of the relay server generating issuance information for the identification data based on the read issuance company information, and transmitting issuance results based on the issuance information to the POS terminal and the issuance server,
wherein prepaid cash is output in a receipt form by the POS terminal based on the issuance results.

[8] The method according to claim 7, further comprising a third step of the issuance server updating the issuance results in an issuance result DB.

[9] The method according to claim 8, further comprising:
a fourth step of the issuance server receiving identification data of the prepaid cash from at least one user terminal;
a fifth step of the issuance server approving use of the prepaid cash with reference to the issuance result DB; and
a sixth step of the issuance server providing a charged service to the user terminal.

[10] The method according to claim 8, further comprising:
a seventh step of the issuance server receiving identification data of the prepaid cash, which has been transmitted to a service providing server by a user terminal, from the service providing server;
an eighth step of the issuance server approving use of the prepaid cash with reference to the issuance result DB; and
a ninth step of the issuance server transmitting approval results for the use of the prepaid cash to the service providing server such that the service providing server provides a charged service to a user terminal.

[11] The method according to claim 7, further comprising:

a tenth step of the relay server reading the issuance company information included in the identification data, the identification data being received along with a purchase cancellation request for the prepaid cash issued based on the issuance results, both being received from the POS terminal;
an eleventh step of the relay server transmitting the identification data, together with the purchase cancellation request, to the issuance server corresponding to the read issuance company information;
a twelfth step of the issuance server canceling issuance of the identification data received along with the purchase cancellation request and updating issuance cancellation results in an issuance result DB, and transmitting the issuance cancellation results to the relay server; and
a thirteenth step of the relay server transmitting the issuance cancellation results, received from the issuance server, to the POS terminal,
wherein purchase of the prepaid cash is cancelled by the POS terminal based on the issuance cancellation results.

[12] A system for relaying prepayment identification data, comprising:
a relay server for generating activation information for identification data of a prepaid card, which is received from at least one POS terminal, and then transmitting activation results according to the activation information to the POS terminal; and
at least one issuance server for updating the identification data of the activated prepaid card using the activation results received from the relay server.

[13] The system according to claim 12,
wherein the relay server comprises:
issuance company identification means configured to identify an issuance company for the identification data received from the POS terminal;
an activation DB configured to previously store the identification data; and
activation means configured to generate the activation information for the identification data received from the POS terminal with reference to the activation DB and update the activation DB, and to transmit the activation results based on the received identification data to the POS terminal and the issuance server, and
wherein the issuance server receives the activation results from the relay server, and then updates the identification data previously stored in the activation result DB.

[14] The system according to claim 12, wherein the issuance server provides a charged service to a user terminal, which transmitted the identification data of the prepaid card which has been purchased, based on the activation results.

[15] The system according to claim 12, wherein the identification data comprises an

identification number and issuance company information of the prepaid card.

[16] The system according to claim 12,
wherein the relay server comprises issuance company identification means capable of identifying issuance company information from the identification data, the identification data being received along with a purchase cancellation request for the prepaid card activated based on the activation results, both being received from the POS terminal, and transmits the identification data to an issuance server corresponding to issuance company information read using the issuance company identification means, the identification data being received along with the purchase cancellation request, and
wherein the issuance server comprises:
an activation result DB configured to previously store the identification data; and
sale cancellation means configured to cancel activation of the identification data received from the POS terminal with reference to the activation result DB, the identification data being received along with the purchase cancellation request, and updates issuance cancellation results based on the identification data in the activation result DB.

[17] A method of relaying prepayment identification data, the method being applied to a system for relaying prepayment identification data, the system including at least one POS terminal, at least one issuance server, and a relay server, the method comprising:
a first step of the relay server reading issuance company information included in identification data of a prepaid card, which is received from the POS terminal; and
a second step of the relay server generating activation information for the identification data based on the read issuance company information, and transmitting activation results based on the activation information to the POS terminal and the issuance server,
wherein sale of a prepaid card is completed based on the activation results.

[18] The method according to claim 17, further comprising a third step of the issuance server updating the activation results in an activation result DB.

[19] The method according to claim 18, further comprising:
a fourth step of the issuance server receiving the identification data of the prepaid card from at least one user terminal;
a fifth step of the issuance server approving use of the prepaid card with reference to the activation result DB; and
a sixth step of the issuance server providing a charged service to the user terminal.

[20] The method according to claim 18, further comprising:
a seventh step of the issuance server receiving the identification data of the prepaid card, which has been transmitted to a service providing server by a user terminal, from the service providing server;
an eighth step of the issuance server approving use of the prepaid card with reference to the activation result DB; and
a ninth step of the issuance server transmitting approval results for the use of the prepaid card to the service providing server such that the service providing server provides a charged service to a user terminal.

[21] The method according to claim 17, further comprising:
a tenth step of the relay server reading the issuance company information included in the identification data, the identification data being received along with a purchase cancellation request for the prepaid card activated based on the activation results, both being received from the POS terminal;
an eleventh step of the relay server transmitting the identification data, together with the purchase cancellation request, to the issuance server corresponding to the read issuance company information;
a twelfth step of the issuance server canceling activation of the identification data received along with the purchase cancellation request and updating activation cancellation results in an activation result DB, and transmitting the activation cancellation results to the relay server; and
a thirteenth step of the relay server transmitting the activation cancellation results, received from the issuance server, to the POS terminal,
wherein purchase of the prepaid card is cancelled by the POS terminal based on the activation cancellation results.