

【DESCRIPTION】

【Invention Title】

PERSONAL CARD TRANSACTION DETAILS PROCESSING SYSTEM AND METHOD, AND COMPUTER PROGRAM

5 【Technical Field】

Exemplary embodiments relate to a system, method and computer program for processing usage information of a personal card, and more particularly, to technology that easily collects payments made by executives and employees of a company using personal cards for the purpose of business expenses and easily transmits the collected payments to an
10 expense processing clerk.

【Background Art】

Companies usually issue corporate joint cards or corporate individual cards to their executives and employees for convenience of expense execution. However, because corporate cards cannot be issued to all executives and employees, executives and employees
15 who were not issued with corporate cards are required to make payments using personal cards, and then prepare expense statements corresponding to the payments and submit it to an expense processing clerk of the company together with written evidence (for example, receipts). In general, this submission process is manually performed using a printed document on a paper, and after approval of the expense statement is completed, the approved
20 expense statement is filed and kept in a warehouse, or is scanned to create an image and stored in a server.

It is impossible that the company directly collects employees' card payments by reason of personal information protection and privacy invasion prevention, even though the payments were made for the purpose of business expenses. Thus, even though expenses are

incurred, an expense processing clerk cannot recognize the incurrence of expenses until an employee having used a personal card submits an attached written evidence. However, from the point of view of the employee having used the personal card, preparing expense statements with written evidence such as paper receipts attached thereto is a very tedious process because of being manually performed in whole, and thus, employees cannot but endure a variety of problems with the reduced efficiency at work due to expense statements peaking toward the end of the month, the prolonged period of handling an unnecessary task due to the manual task, errors and omission in data due to the manual task, and increases in unnecessary incidental expenses for preparing paper documents.

【Disclosure】

【Technical Problem】

According to an aspect of the present disclosure, there is provided a system and method for processing usage information of a personal card that easily collects payments made by executives and employees using their personal cards for the purpose of business expenses and easily transmits the collected payments to an expense processing clerk, and a management service server, a user device and a computer program therefor.

【Technical Solution】

According to an embodiment, a system for processing usage information of a personal card comprises a first user device of a personal card user and a management server.

The first user device is configured to store account information or card information of the user, receive personal card payments from a card company server by a scrapping or electronic data interchange method using the account information or the card information, and transmit at least one payment selected to submit for expense processing

from the personal card payments.

The management service server is configured to receive the at least one payment from the first user device, store the at least one received payment for expense processing, and transmit notification information corresponding to the at least one payment to a
5 second user device of an expense processing clerk.

In an embodiment, the management service server does not store the account information and the card information.

According to an embodiment, a management service server for processing usage information of a personal card, comprises: a receiving unit configured to receive at least
10 one payment selected to submit for expense processing from personal card payments, from a first user device of a personal card user; a storing unit configured to store the at least one payment received by the communication unit for expense processing; and a notification transmitting unit configured to transmit notification information corresponding to the at least one payment to a second user device of an expense
15 processing clerk.

In an embodiment, the at least one payment is obtained by the first user device from a card company server by a scrapping or electronic data interchange method using account information or card information of the user.

In an embodiment, the notification information includes at least one of a Short
20 Message Service (SMS) message, a Multimedia Message Service (MMS) message, an e-mail, or a push notification.

In an embodiment, the receiving unit is configured to further receive, from the first user device, at least one recipient information to receive the at least one payment, and the notification transmitting unit is further configured to transmit the notification

information to the second user device corresponding to the recipient information.

In an embodiment, the management service server further comprises: a user database in which a plurality of user information is stored, wherein the notification transmitting unit is further configured to identify the second user device corresponding to the recipient information by inquiring into the user database using the recipient information.

In an embodiment, the receiving unit is further configured to transmit a user list generated based on the user database to the first user device, and the recipient information includes selection information for at least one user in the user list.

According to an embodiment, a user device for use by a personal card user comprises: a communication unit configured to store account information or card information of the user, and receive personal card payments from a card company server by a scrapping or electronic data interchange method using the account information or the card information; a display unit configured to display the personal card payments; and an input unit configured to receive input of selection information of the user for payment to submit for expense processing, based on the personal card payments displayed on the display unit.

The communication unit is further configured to transmit at least one payment selected to submit by the selection information to the management service server for expense processing.

In an embodiment, the input unit is configured to further receive input of at least one recipient information to receive the at least one payment, and the communication unit is further configured to transmit the recipient information to the management service server.

In an embodiment, the communication unit is configured to further receive a user list generated based on the user database of the management service server from the management service server. Herein, the recipient information includes selection information for at least one user included in the user list.

5 According to an embodiment, a method for processing usage information of a personal card comprises: receiving, by a management service server, at least one payment submitted for expense processing from a first user device of a personal card user; storing, by the management service server, the at least one payment in the management service server for expense processing; and transmitting, by the management service server,
10 notification information corresponding to the at least one payment to a second user device of an expense processing clerk.

In an embodiment, the at least one payment is obtained by the first user device from a card company server by a scrapping or electronic data interchange method using account information or card information of the user.

15 In an embodiment, the transmitting of notification information comprises transmitting at least one of a Short Message Service (SMS) message, a Multimedia Message Service (MMS) message, an e-mail, or a push notification to the second user device.

 In an embodiment, the method for processing usage information of a personal
20 card further comprises: receiving, by the management service server, at least one recipient information to receive the at least one payment from the first user device. Herein, the transmitting of notification information comprises transmitting the notification information to the second user device corresponding to the recipient information.

In an embodiment, the transmitting of notification information further comprises identifying the second user device corresponding to the recipient information by inquiring into a user database of the management service server using the recipient information.

5 In an embodiment, the method for processing usage information of a personal card further comprises, before the receiving of at least one recipient information, transmitting, by the management service server, a user list generated based on a user database to the first user device. Herein, the recipient information includes selection information for at least one user in the user list.

10 According to another embodiment, a method for processing usage information of a personal card comprises: receiving, by a user device of a personal card user, personal card payments from a card company server by a scrapping or electronic data interchange method using account information or card information of the user; displaying the personal card payments on the user device; receiving, by the user device, input of
15 selection information of the user for payment to submit for expense processing, based on the personal card payments displayed on the user device; and transmitting, by the user device, at least one payment selected to submit by the selection information to a management service server.

In an embodiment, the method for processing usage information of a personal
20 card further comprises: receiving, by the user device, input of at least one recipient information to receive the at least one payment; and transmitting, by the user device, the at least one recipient information to the management service server.

In an embodiment, the receiving, by the user device, input of at least one recipient information comprises: receiving, by the user device, a user list generated based

on a user database of the management service server; and receiving, by the user device, input of selection information for at least one user in the user list.

A computer program according to an embodiment is to enable the execution of the method for processing usage information of a personal card according to
5 aforementioned embodiments and can be stored in a computer-readable medium.

【Advantageous Effects】

By the system and method for processing usage information of a personal card according to an aspect of the present disclosure, executives and employees who made payments using personal cards for the purpose of business expenses can easily inquire about
10 the payments through an application (or app) that is executed on their user devices, designate a recipient for payment to submit for expense processing, enter the purpose, etc. and easily transmit receipt data to an expense processing clerk.

By the system and method for processing usage information of a personal card according to an aspect of the present disclosure, a personal card user receives payments from
15 a card company using his/her user device, selects only payment to submit therefrom and transmits the same to a management service server, thereby collecting personal card payments rapidly and efficiently without concerns about infringement on personal information and privacy of executives and employees.

Furthermore, by the system and method for processing usage information of a
20 personal card according to an aspect of the present disclosure, the receipt data and the purpose transmitted by the personal card user is stored in the management service server, and notification is transmitted to the designated expense processing clerk. The expense processing clerk who received notification accesses the management service server, and then inquires about the personal card receipt data and performs expense processing, such as

accepting or turning back the receipt, identifying the amount, purpose and content, and if necessary, modifying it.

【Description of Drawings】

FIG. 1 is a schematic block diagram of a system for processing usage information of
5 a personal card according to an embodiment.

FIG. 2 is a schematic block diagram of a user device according to an embodiment.

FIG. 3 is a schematic flowchart of a method for processing usage information of a
personal card according to an embodiment.

FIGS. 4 through 7 are images showing exemplary screens on a user device for
10 processing usage information of a personal card according to embodiments.

FIG. 8 is an image showing an exemplary screen on a user device of an expense
processing clerk accessing a management service server according to embodiment.

【Mode for Invention】

Hereinafter, the embodiments of the present disclosure will be described in detail
15 with reference to the accompanying drawings.

FIG. 1 is a schematic block diagram of a system for processing usage information of a
personal card according to an embodiment.

Referring to FIG. 1, the system for processing usage information of a personal card
according to this embodiment includes a first user device 1 of a personal card user and a
20 management service server 3 that receives payments submitted for expense processing from
the first user device 1. The first user device 1 and the management service server 3 are
configured to allow communication with each other via a wired and/or wireless network 2.
Furthermore, the first user device 1 is also configured to allow communication with a card
company server 4. In an embodiment, the management service server 3 is also configured to

allow communication with a national tax organization server 5. Furthermore, the management service server 3 is configured to allow communication with a second user device 6 of an expense processing clerk.

Communication methods via the wired and/or wireless network 2 include any communication method that allows networking between objects, and are not limited to wired communication, wireless communication, 3G, 4G, or other methods. For example, the wired and/or wireless network 2 refers to a communication network by at least one communication method selected from the group consisting of Local Area Network (LAN), Metropolitan Area Network (MAN), Global System for Mobile Network (GSM), Enhanced Data GSM Environment (EDGE), High Speed Downlink Packet Access (HSDPA), Wideband Code Division Multiple Access (W-CDMA), Code Division Multiple Access (CDMA), Time Division Multiple Access (TDMA), Bluetooth, Zigbee, Wi-Fi, Voice over Internet Protocol (VoIP), LTE Advanced, IEEE802.16m, WirelessMAN-Advanced, HSPA+, 3GPP Long Term Evolution (LTE), Mobile WiMAX (IEEE 802.16e), UMB (formerly EV-DO Rev. C), Flash-OFDM, iBurst and MBWA (IEEE 802.20) systems, HIPERMAN, Beam-Division Multiple Access (BDMA), World Interoperability for Microwave Access (Wi-MAX) and ultrasonic communication, but is not limited thereto.

In an embodiment, the management service server 3 includes a receiving unit 31, a storing unit 32, and a notification transmitting unit 33. Furthermore, in an embodiment, the management service server 3 further includes a user database 34.

The system, the user device and the server according to the embodiments may take the form of entirely hardware or partially hardware and partially software. For example, the user devices 1 and 6 and the management service server 3, and each unit included therein may refer collectively to hardware and its related software for processing data of particular format

and content and/or transmitting and receiving it by an electronic communication method. The term "unit", "module", "device", "terminal", "server" or "system" as used herein is intended to refer to a combination of hardware and software that works by the corresponding hardware. For example, the hardware may be a data processing device including a central processing unit (CPU) or other processor. Furthermore, the software that works by the hardware may refer to a process being executed, an object, an executable, a thread of execution, and a program.

Each element that makes up the management service server 3 according to this embodiment is not necessarily intended to indicate separate devices that are physically different from each other. That is, the receiving unit 31, the storing unit 32, the notification transmitting unit 33 and the user database 34 of FIG. 1 are only functional division of hardware that makes up the management service server 3 according to the operation performed by the corresponding hardware, and each unit does not need to be provided independently from each other. Of course, according to the embodiments, at least one of the receiving unit 31, the storing unit 32, the notification transmitting unit 33 and the user database 34 can be embodied as separate devices that are physically different from each other.

In an embodiment, the management service server 3 acts, at least in part, as an application server that allows the function of the application to be performed, by communicating with an application (or app) that is executed on the first user device 1 of the personal card user. And/or, the management service server 3 may act as a web server that provides a predetermined web page accessible via a web browser that is executed on the first user device 1 and the second user device 6.

The first user device 1 according to an embodiment is embodied in the form of a smartphone, and the first user device 1 carries out personal card payment inquiry for expense

processing and receipt submission by communicating with the card company server 4 and the management service server 3 through the application. However, the type of the first user device 1 is not limited to a smartphone, and the first user device 1 may be embodied in the form of any computing device such as other mobile communication terminal, a personal computer, a notebook computer, a personal digital assistant (PDA), a tablet, and a set-top box for Internet Protocol Television (IPTV).

The personal card user as used herein refers to the company's executive or employee using a card for the purpose of business expenses, and here, the card is not a corporate card in the name of the company, but a card issued in the name of an individual. The first user device 1 as used herein is a device used by the personal card user. Furthermore, the personal card as used herein refers to a card issued in the name of an individual user using the first user device 1, not a corporate card in the name of the company. Further, the second user device 6 as used herein refers to a device used by an expense processing clerk whose primary task is expense processing in the company.

In the case of expense processing of expenses spent by executives and employees using personal cards, it is impossible that the company directly collects card payments due to concerns about infringement on personal information and privacy. The embodiments of the present disclosure are aimed at solving such inconvenience, and the first user device 1 is configured to transmit only payments selected to submit by the user to the management service server 3, to allow the management service server 3 to collect receipt data without infringement on personal information or privacy of executives and employees and thereby perform expense processing smoothly. The specific operation is described below.

FIG. 2 is a schematic block diagram of the user device according to an embodiment.

The user device according to this embodiment is for use by a personal card user, and

corresponds to the first user device 1 of the embodiment shown in FIG. 1. Referring to FIG. 2, the user device 1 includes a communication unit 11, a display unit 12 and an input unit 13. Each unit 11-13 shown in FIG. 2 is functional division of the user device 1 according to the operation performed by the user device 1 for processing personal card payments, and does not necessarily indicate separate devices that are physically different from each other. For example, the display unit 12 and the input unit 13 may be integrally formed in the form of a touchscreen that concurrently performs display and input through the screen.

The communication unit 11 is configured to transmit a request for personal card payments to the card company server 4, and receive personal card payments from the card company server 4. According to an inquiring method of payments from the card company server 4, the communication unit 11 may store account information (for example, an ID and a password, or a digital certificate and a certificate password, etc.) of the user and/or card information (for example, a card number, an expiration date and a Card Verification Code (CVC)) of the personal card, and transmit some or all of the information to the card company server 4 in response to the request for payments.

In an embodiment, the communication unit 11 acquires personal card payments from the card company server 4 by a scrapping method. The scrapping as used herein refers to technique that extracts only necessary information from information provided by the card company server 4 through its homepage and fetches data, and scrapping includes screen scrapping or data scrapping according to a specific extraction method. The communication unit 11 is configured to acquire personal card payments from the card company server 4 by any type of known scrapping technique. The scrapping by the communication unit 11 may be periodically performed, or may be performed when there is an inquiry request from the user.

In another embodiment, the communication unit 11 acquires personal card payments from the card company server 4 by an Electronic Data Interchange (EDI) method. The EDI as used herein refers to an information transmission method that converts information provided by the card company server 4 to a standardized electronic document in accordance with a predetermined communication standard and allows the communication unit 11 to receive it. To enable personal card payment acquisition through an EDI method, an agreement may be made with the card company server 4, whereby the card company server 4 agrees to respond to the request through an application that is executed on the user device 1.

In an embodiment, inquiry of personal card payments by the communication unit 11 is performed, at least in part, using an exclusive line connected to the card company server 4. To this end, the communication unit 11 may transmit and receive data to/from the card company server 4 via a gateway server (not shown) connected to the card company server 4 with the exclusive line. The exclusive line as used herein refers to a type of network exclusively connected to the card company server 4, not a public network. For example, the exclusive line may be an exclusive line by a software means implemented using Virtual Private Network (VPN) on TCP/IP protocol based network, and may be an exclusive line by a hardware means that makes a physical connection using a Digital Service Unit (DSU) and a router. Furthermore, the management service server 3 may act, at least in part, as a gateway server by the connection to the card company server 4 with the exclusive line.

In an embodiment, the communication unit 11 inquires about a taxation type for each merchant of the personal card payments, and further receives taxation type information for each merchant, by further communicating with the national tax organization server 5. The application running on the first user device 1 displays the taxation type information of the merchants with the personal card payments, and through this, the personal card user can easily

perceive whether owners corresponding to each merchant are taxed or tax exempted, or a general taxpayer or a simplified taxpayer.

Furthermore, in an embodiment, the communication unit 11 may be configured to further inquire about whether owners corresponding to each merchant closed and/or quit
5 business, by communicating with the national tax organization server 5.

The inquiry of the taxation type and business closing and/or quitting may be performed in the way that the communication unit 11 scraps information provided by the national tax organization server 5. Alternatively, inquiry of the taxation type and business closing and/or quitting may be carried out, at least in part, via the exclusive line connected to
10 the national tax organization server 5 to allow communication. Here, the exclusive line may be similar to the exclusive line connecting the gateway server to the card company server 4.

The display unit 12 is configured to display the personal card payments received by the communication unit 11, and the personal card user sees the personal card payments displayed on the display unit 12 and inputs, into the input unit 13, selection information for
15 payment to submit to the expense processing clerk as receipt data for expense processing. The receipt data of payment to submit may include an approval number, an approval date, merchant information and an amount of the payment made using the personal card. In this instance, the user may further input, into the input unit 13, the purpose and the content in relation to the payment to submit, and recipient information (i.e., expense processing clerk
20 information) to receive the corresponding receipt.

The specific operation for receipt selection and submission using the user device according to an embodiment is described in detail below with reference to FIGS. 4 through 7.

Referring back to FIG. 1, the receiving unit 31 of the management service server 3 receives at least one payment submitted from the first user device 1 of the personal card user.

The received payment includes receipt data, and further, may further include the purpose and the content inputted by the user and/or recipient information to receive the corresponding receipt. In the embodiments, the management service server 3 does not store account information or card information for inquiring about personal card payments. The inquiry
5 operation using account information or card information is performed by the first user device 1, and the management service server 3 only receives the receipt data submitted by the user. Accordingly, there is no concern about infringement on personal information or privacy of the personal card user.

The management service server 3 stores the payment received by the receiving unit
10 31 in the storing unit 32, and transmits notification information about that the payment was received to the recipient (i.e., the expense processing clerk) designated by the user of the first user device 1. The management service server 3 may inquire into the pre-stored user database 34, identify the second user device 6 of the expense processing clerk corresponding to the recipient, and transmit notification to the second user device 6. The notification is
15 transmitted to the second user device 6 as a Short Message Service (SMS) message, a Multimedia Message Service (MMS) message, an e-mail, a push notification through an application, or any other appropriate type of notification.

The expense processing clerk may recognize that there is a receipt applied for expense processing through the notification received by the second user device 6, then access
20 the management service server 3 using the second user device 6 to read the payment stored in the management service server 3, and perform a necessary procedure for approval of cost execution, such as accepting or turning back the receipt, or identifying the amount, purpose, and content of the receipt, and if necessary, modifying it.

FIG. 3 is a schematic flowchart of a method for processing usage information of a

personal card according to an embodiment.

Referring to FIG. 3, the personal card user may request payments to the card company server 4 using his/her first user device 1 (S1). To this end, the user may pre-input, into the first user device 1, account information of the card company homepage (for example, an ID and a password, or a digital certificate and a certificate password, etc.) and/or card information (for example, a card number, an expiration date and CVC) as information related to a personal card used by the user. In an embodiment, the first user device 1 receives personal card payments from the card company server 4 by a screen scrapping method or an EDI method using the account information and/or the card information.

When personal card payments including an approval number, an approval date, merchant information, and an amount for a series of payments made using the personal card is transmitted from the card company server 4 to the first user device 1 (S2), the first user device 1 displays the received personal card payments (S3). In this instance, the first user device 1 may further perform an operation for inquiring about taxation type or business closing and/or quitting of merchants corresponding to the payments from the national tax organization server. On the other hand, communication between the first user device 1 and the card company server 4 may be performed as encrypted communication via a public network, or may be performed, at least in part, via a gateway server connected to the card company server 4 with an exclusive line. For example, the management service server 3 may act as a gateway server.

The personal card user may identify the personal card payments displayed on the first user device 1, and input selection information for at least one payment to submit for expense processing into the first user device 1 (S4). Furthermore, in this instance, the personal card user may further input the purpose and the content related to the payment to submit, and

recipient information (i.e., expense processing clerk information) to receive the corresponding receipt. In an embodiment, the first user device 1 may be configured to receive a user list based on the user database of the management service server 3 from the management service server 3, and allow the user to select a recipient of the receipt based on the received user list.

5 FIGS. 4 through 7 are images showing exemplary screens on the user device for processing usage information of the personal card according to embodiments. Referring to FIGS. 4 through 7, the operation (S3, S4) for displaying personal card payments on the user device and selecting payment to submit is described in detail.

FIG. 4 shows the screen displaying that the personal card user executes an application
10 on the user device and inquire about the personal card transaction limit, and information, such as the remaining balance, the spent amount, and the total spent amount, received through communication with the card company server is displayed on the screen of the user device. A user interface of the application displayed on the screen may include interface elements 401-404 corresponding respectively to summary, a payment list, notification and other
15 settings. Furthermore, when the user possesses a plurality of personal cards, a drop-down element 405 for selecting a personal card to inquire may be displayed on the screen. However, it will be easily understood by those skilled in the art that the type of the user interface shown in FIG. 4 is for illustration purposes only.

FIG. 5 shows the screen on which a payment list is displayed by selecting the
20 interface element 402 on the screen shown in FIG. 4. The personal card payments 501-504, 511 and 512 inquired through communication with the card company server were displayed in the form of a list on the screen of FIG. 5. Each payment 501-504, 511 and 512 includes information such as the date, amount and location. When the user possesses a plurality of personal cards, the payments may be displayed for each card.

In an embodiment, payments 501-504 for which the personal card user has already submitted receipts for expense processing and payments 511, 512 for which the personal card user has not yet submitted receipts are displayed in different forms, to allow the user to easily perceive payments for which the user will have to submit receipts. Although FIG. 5 shows that payments 501-504 for which receipts were submitted and payments 511, 512 for which receipt were not submitted are displayed in different colors, this is for illustration purposes, and in other embodiments, payments may be displayed in different forms depending on whether or not receipts were submitted, for example, payments may be listed separately.

FIGS. 6A through 6E show screens displaying a process in which the personal card user inputs selection information to submit a receipt for a particular payment.

When the user selects a certain payment 600 for which a receipt was not yet submitted from a payment list shown in FIG. 6A, detailed information related to the corresponding payment may be displayed on a separate screen as shown in FIG. 6B. The detailed information displayed on the separate screen includes payment information 604 including information such as a card approval number, an approved amount, an amount tendered, and a value added tax, merchant information 601 including a merchant name or a business registration number, and a business type 603 of the merchant. In an embodiment, the user device further receives taxation type information of the corresponding merchant by communicating with the national tax organization server, and the taxation type information is displayed on the user device as part of the detailed information about the payment as indicated by 602 in FIG. 6B.

When the user selects an interface element 605 on the screen shown in FIG. 6B to carry out receipt submission for the corresponding payment, a separate screen for selecting a recipient of the receipt may be displayed as shown in FIG. 6C. The recipient of the receipt

refers to an expense processing clerk to carry out approval and settlement of expense processing for the corresponding receipt. The user device receives a related user list from the management service server and displays it, and the personal card user may designate one or more users in the received user list as a recipient.

5 In an embodiment, the user database of the management service server includes relationship information between a plurality of users, and the management service server may generate a related user list related to the personal card user using the relationship information and present it to the user device, allowing the personal card user to easily select an expense processing clerk related to the personal card user.

10 For example, the user database may store company information to which each user belongs, and the management service server may transmit a related user list consisting only of users who belong to the same company as the personal card user requesting receipt submission to the user device, allowing the user to identify a receipt recipient from the related user list.

15 Alternatively, the user database may include online contact information that is pre-inputted by each user and stored in the user database, and the management service server may transmit a user list registered in an online contact of the personal card user requesting receipt submission to the user device, allowing the user to identify a receipt recipient from his/her online contact.

20 When the personal card user selects the recipient of the receipt, a payment inquiry screen including designated recipient information 606 is displayed as shown in FIG. 6D. Furthermore, the user may input the purpose (for example, gasoline costs, transportation fees, etc.) for the corresponding payment by selecting an interface element 607 on the corresponding screen, and may further include the content of use by selecting an interface

element 608. After the personal card user inputs all necessary information, the personal card user selects an interface element 609 for receipt submission, and thereby the recipient information designed by the user and the purpose and/or the content inputted by the user is transmitted to the management service server as selection information of the user for
5 transmission to the management service server.

In an embodiment, the user may further attach a photographic or scanned image of the paper receipt as information associated with the payment to submit. FIG. 6E is the screen displayed when the user selects the interface element 608 on the screen shown in FIG. 6D, and the user may input payment through an input box 610 on the screen shown in FIG.
10 6E. In this instance, the user may select each interface element 611-613 displayed on the screen to capture a new image or select a stored image, or select an attachment file other than an image, and input it into the input box 610. Using this, the user inputs an image 620 of the paper receipt corresponding to the receipt data submitted by the user into the input box 610, to allow the receipt image 620 to be transmitted to the management service server together with
15 other electronic information.

Although FIGS. 4 through 6 show the screen in the case where the personal card user carries out receipt submission for the first time, the user interface may be configured to allow the corresponding user to submit a receipt with no need to newly designate a recipient each time, in the case where the user has carried out receipt submission before.

20 FIGS. 7A and 7B show exemplary screens therefor, and if the personal card user has submitted receipts before, clerk information 700 having received receipts from the corresponding personal card user before may be displayed on the detailed inquiry screen of the payment as shown in FIG. 7A. The personal card user may designate an expense processing clerk to receive the receipt being submitted at this time by selecting a particular

clerk from the clerk information 700. Furthermore, the personal card user may call for a clerk list management screen as shown in FIG. 7B by selecting an interface element 701, and add or delete a clerk to be displayed as the clerk information 700.

Referring back to FIG. 3, the payment submitted from the first user device 1 of the personal card user is transmitted to the management service server 3 (S5). The management service server 3 stores receipt data and related information of the received payment in the management service server 3 (S6), and transmits notification information to the second user device 6 of the expense processing clerk designated as a recipient by the related information (S7). The notification information is transmitted to the second user device 6 in the form of SMS, MMS, an e-mail, and a push notification through an application, to allow the expense processing clerk to recognize the fact that there is a receipt submitted for expense processing. The management service server 3 may define necessary information such as a mobile phone number or an e-mail address of the expense processing clerk to receive, by inquiring into the user database using the recipient information designated by the personal card user, and using this, may transmit notification information.

The expense processing clerk who received the notification information may identify the receipt and the related information received and stored in the management service server 3, by accessing the management service server 3 using the second user device 6 (S8). In this instance, the management service server 3 may act as a web server providing a predetermined web page that allows the expense processing clerk to read receipts and carry out expense processing such as settlement and approval of payments for which receipts were submitted.

FIG. 8 is an image showing an exemplary screen of the user device of the expense processing clerk having access to the management service server according to an embodiment.

Referring to FIG. 8, the expense processing clerk may read the received personal card payments destined for himself/herself as a recipient by getting access to the management service server. The submitted payment may include receipt data, and information corresponding to the corresponding receipt, such as the user, date, amount, merchant and purpose and/or content. Furthermore, the submitted payment may include an image of a real receipt corresponding to receipt data. The expense processing clerk may read payments of all personal card users at once, or may inquire about the current card user status or separately read payments of an individual user. Furthermore, the expense processing clerk may perform a management task, such as registering or modifying a personal card user for expense processing.

The operation by the method for processing usage information of a personal card according to the embodiments as described hereinabove may be implemented, at least in part, as a computer program and recorded in a computer-readable recording medium. The computer-readable recording medium for recording the program for implementing the operation by the method for processing usage information of a personal card according to the embodiments includes any type of recording device in which computer-readable data is stored. Examples of the computer-readable recording medium include ROM, RAM, CD-ROM, magnetic tape, floppy disks, and optical data storage devices. Furthermore, the computer-readable recording medium may be distributed over computer systems connected via a network, to store and execute computer-readable codes in a distribution fashion. Additionally, functional programs, codes and code segments for implementing this embodiment will be easily understood by person having ordinary skill in the technical field to which this embodiment belongs.

While the present disclosure has been described hereinabove with reference to the

embodiments shown in the drawings, this is for illustration only, and it will be apparent to person having ordinary skill in the art that various modifications and variations in the embodiments may be made thereto. However, it should be understood that such modifications fall within the technical scope of protection of the present disclosure.

- 5 Therefore, the true technical scope of protection of the present disclosure should be defined by the technical spirit of the appended claims.

【Industrial Applicability】

- Exemplary embodiments relate to a system, method and computer program for processing usage information of a personal card, and more particularly, to technology that
- 10 easily collects payments made by executives and employees of a company using personal cards for the purpose of business expenses and easily transmits the collected payments to an expense processing clerk.

【CLAIMS】

【Claim 1】

A system for processing usage information of a personal card, comprising:

5 a first user device a personal card user, the first user device being configured to store account information or card information of the user, receive personal card payments from a card company server by a scrapping or electronic data interchange method using the account information or the card information, and transmit at least one payment selected to submit for expense processing from the personal card payments; and

10 a management service server configured to receive the at least one payment from the first user device, store the at least one received payment for expense processing, and transmit notification information corresponding to the at least one payment to a second user device of an expense processing clerk.

【Claim 2】

15 The system for processing usage information of a personal card according to claim 1, wherein the management service server does not store the account information and the card information.

【Claim 3】

20 A management service server for processing usage information of a personal card, comprising:

a receiving unit configured to receive at least one payment selected to submit for expense processing from personal card payments, from a first user device of a personal card user;

a storing unit configured to store the at least one payment received by the communication unit for expense processing; and

a notification transmitting unit configured to transmit notification information corresponding to the at least one payment to a second user device of an expense processing clerk.

【Claim 4】

The management service server for processing usage information of a personal card according to claim 3, wherein the at least one payment is obtained by the first user device from a card company server by a scrapping or electronic data interchange method using account information or card information of the user.

【Claim 5】

The management service server for processing usage information of a personal card according to claim 3, wherein the notification information includes at least one of a Short Message Service (SMS) message, a Multimedia Message Service (MMS) message, an e-mail, or a push notification.

【Claim 6】

The management service server for processing usage information of a personal card according to claim 3, wherein the receiving unit is configured to further receive, from the first user device, at least one recipient information to receive the at least one payment, and

the notification transmitting unit is further configured to transmit the notification information to the second user device corresponding to the recipient information.

【Claim 7】

The management service server for processing usage information of a personal card according to claim 6, further comprising:

5 a user database in which a plurality of user information is stored,

wherein the notification transmitting unit is further configured to identify the second user device corresponding to the recipient information by inquiring into the user database using the recipient information.

10 **【Claim 8】**

The management service server for processing usage information of a personal card according to claim 7, wherein the receiving unit is further configured to transmit a user list generated based on the user database to the first user device, and

15 wherein the recipient information includes selection information for at least one user in the user list.

【Claim 9】

A user device for use by a personal card user, the user device comprising:

20 a communication unit configured to store account information or card information of the user, and receive personal card payments from a card company server by a scrapping or electronic data interchange method using the account information or the card information;

a display unit configured to display the personal card payments; and

an input unit configured to receive input of selection information of the user for payment to submit for expense processing, based on the personal card payments displayed on

the display unit,

wherein the communication unit is further configured to transmit at least one payment selected to submit by the selection information to the management service server for expense processing.

5

【Claim 10】

The user device according to claim 9, wherein the input unit is configured to further receive input of at least one recipient information to receive the at least one payment, and

wherein the communication unit is further configured to transmit the recipient
10 information to the management service server.

【Claim 11】

The user device according to claim 10, wherein the communication unit is configured to further receive a user list generated based on the user database of the management service
15 server from the management service server, and

wherein the recipient information includes selection information for at least one user included in the user list.

【Claim 12】

20 A method for processing usage information of a personal card, the method comprising:

receiving, by a management service server, at least one payment submitted for expense processing from a first user device of a personal card user;

storing, by the management service server, the at least one payment in the

management service server for expense processing; and

transmitting, by the management service server, notification information corresponding to the at least one payment to a second user device of an expense processing clerk.

5

【Claim 13】

The method for processing usage information of a personal card according to claim 12, wherein the at least one payment is obtained by the first user device from a card company server by a scrapping or electronic data interchange method using account information or card information of the user.

10

【Claim 14】

The method for processing usage information of a personal card according to claim 12, wherein the transmitting of notification information comprises transmitting at least one of a Short Message Service (SMS) message, a Multimedia Message Service (MMS) message, an e-mail, or a push notification to the second user device.

15

【Claim 15】

The method for processing usage information of a personal card according to claim 12, further comprising:

20

receiving, by the management service server, at least one recipient information to receive the at least one payment from the first user device,

wherein the transmitting of notification information comprises transmitting the notification information to the second user device corresponding to the recipient information.

【Claim 16】

The method for processing usage information of a personal card according to claim 15, wherein the transmitting of notification information further comprises identifying the second user device corresponding to the recipient information by inquiring into a user database of the management service server using the recipient information.

【Claim 17】

The method for processing usage information of a personal card according to claim 15, before the receiving of at least one recipient information, further comprising:

transmitting, by the management service server, a user list generated based on a user database to the first user device,

wherein the recipient information includes selection information for at least one user in the user list.

【Claim 18】

A method for processing usage information of a personal card, comprising:

receiving, by a user device of a personal card user, personal card payments from a card company server by a scrapping or electronic data interchange method using account information or card information of the user;

displaying the personal card payments on the user device;

receiving, by the user device, input of selection information of the user for payment to submit for expense processing, based on the personal card payments displayed on the user device; and

transmitting, by the user device, at least one payment selected to submit by the selection information to a management service server.

【Claim 19】

5 The method for processing usage information of a personal card according to claim 18, further comprising:

 receiving, by the user device, input of at least one recipient information to receive the at least one payment; and

 transmitting, by the user device, the at least one recipient information to the
10 management service server.

【Claim 20】

 The method for processing usage information of a personal card according to claim 19, wherein the receiving, by the user device, input of at least one recipient information
15 comprises:

 receiving, by the user device, a user list generated based on a user database of the management service server; and

 receiving, by the user device, input of selection information for at least one user in the user list.

20

【Claim 21】

 A computer program stored in a computer-readable medium to enable the execution of the method for processing usage information of a personal card according to any of claims 12 through 20 in combination with hardware.