

【DESCRIPTION】

【Invention Title】

SYSTEM, METHOD AND COMPUTER PROGRAM FOR MANAGING
USAGE OF CORPORATE CARD

5 **【Technical Field】**

Embodiments relate to a system, a method, and a computer program for managing usage of a corporate card, and more particularly, to a technique that allows a user of the corporate card to inquire usage details in real time and easily transmit the inquired usage details to a person in charge of expense processing.

10 **【Background Art】**

Companies usually issue corporate joint cards or corporate individual cards to their employees for convenience of execution of expenses. When users of the corporate card use their corporate card to incur expenditure, the users would prepare expense statements corresponding to the payment and submit the prepared expense statements to
15 their persons in charge of expense processing along with an evidential document (e.g., corporate card receipts). Such a submission process is usually made by handwriting using documents printed on paper. After an approval of the expense statements is completed, the approved expense statements are filed and kept in a warehouse, or are scanned to create images and stored in a server.

20 However, in this conventional method for managing usage of a corporate card, since all processes involved in the preparation, payment and approval of expense statements are carried out manually by each person in charge, users cannot but put up with various problems such as a reduction in business efficiency due to a concentration of the expense statements at the end of the month, an unnecessary work process time
25 delay due to a manual operation, a data error and a data omission due to the manual

operation, and an increase in unnecessary additional costs for paper document preparation.

In particular, the process of preparing the expense statements and attaching the evidential documents under the conventional techniques is manually performed by the users of the corporate card, and therefore the users of the corporate card cannot immediately grasp the limit of the corporate card or the usage details until now, and should separately store the evidential documents for individual expenditures, such that it is highly likely to cause the omission of the expense processing and the business efficiency may be reduced.

【Disclosure】

【Technical Problem】

According to an aspect of the present invention, a system and a method for managing usage of a corporate card, and a user device and a computer program therefor, which allow a user of the corporate card to inquire usage details in real time and easily transmit the inquired usage details to a person in charge of expense processing, may be provided.

【Technical Solution】

According to one embodiment of the present invention, there is provided a system for managing usage of a corporate card including: an application service server configured to receive a request for usage details of the corporate card from a first user device for a user of the corporate card, receive the usage details of the corporate card from a card company server in response to the received request, and transmit the usage details of the corporate card to the first user device; and a management service server configured to receive selection information on at least one usage detail to be submitted for expense processing among the usage details of the corporate card from the first user

device, store the selection information, and transmit notification information corresponding to the selection information to a second user device for a person in charge of expense processing.

In one embodiment, the application service server may be further configured to
5 communicate with the card company server via a dedicated line, and receive the usage details of the corporate card via the dedicated line.

In one embodiment, the application service server is further configured to obtain the usage details of the corporate card in a scraping scheme using account information received from the first user device.

10 In one embodiment, the notification information may include at least one of a short message service (SMS) message, a multimedia message service (MMS) message, an e-mail, and a push notification transmitted to the second user device.

In one embodiment, the selection information may include a receipt selected to be submitted and information on at least one recipient who receives the selected receipt.
15 The management service server may be further configured to transmit the notification information to the second user device corresponding to the information on the recipient.

The system for managing usage of a corporate card according to one embodiment may further include a user database in which a plurality of pieces of user information is stored. The management service server may be further configured to
20 inquire the user database using the information on the recipient to specify the second user device corresponding to the information on the recipient.

In one embodiment, the management service server may be further configured to transmit a user list created based on the user database to the first user device, wherein the information on the recipient may include selection information on at least one user
25 of the user list.

In one embodiment, the management service server may be further configured to receive taxation type information on each used place of the usage details of the corporate card from a national tax service server, prior to receiving the selection information and to transmit the taxation type information to the first user device.

5 In one embodiment, the management service server may be further configured to, before receiving the selection information, receive transaction item information associated with the usage details of the corporate card from used place of the corporate card and transmit the transaction item information to the first user device.

According to one embodiment of the present invention, there is provided a user
10 device which is for managing usage of a corporate card and is used by users of the corporate card. The user device includes: a communication unit configured to transmit a request for usage details of the corporate card to a server and receive the usage details of the corporate card from the server; a display unit configured to display the usage details of the corporate card; and an input unit configured to receive user selection
15 information on the usage details to be submitted for expense processing based on the usage details of the corporate card displayed on the display unit. The communication unit may be further configured to transmit the selection information to the server.

In one embodiment, the selection information may include a receipt selected to be submitted and information on at least one recipient who receives the selected receipt.

20 In one embodiment, the communication unit may further receive a user list created based on a user database of the server, and the selection information may include selection information on at least one of the users.

In one embodiment, the communication unit may further receive taxation type information on each used place of the usage details of the corporate card or transaction
25 item information associated with the usage details of the corporate card from the server.

The display unit may be further configured to display the usage details of the corporate card together with the taxation type information or the transaction item information.

According to one embodiment of the present invention, there is provided a method for managing usage of a corporate card including: receiving, by an application
5 service server, a request for usage details of the corporate card from a first user device for a user of the corporate card; receiving, by the application service server, the usage details of the corporate card from a card company server in response to the received request for the usage detail of the corporate card; transmitting, by the application service
10 server, the usage details of the corporate card to the first user device; receiving, by a management service server, selection information on at least one usage detail to be submitted for expense processing among the usage details of the corporate card from the first user device; storing the selection information in the management service server; and transmitting, by the management service server, notification information corresponding to the selection information to a second user device for a person in
15 charge of expense processing.

In one embodiment, the receiving of the usage details of the corporate card may include receiving the usage details of the corporate card via a dedicated line through which the application service server and the card company server are communicatively coupled.

20 In one embodiment, the receiving of the usage details of the corporate card may include acquiring the usage details of the corporate card from the card company server in a scraping scheme using account information, which is received from the first user device, at the application service server.

In one embodiment, the transmitting of the notification information may
25 include transmitting at least one of an SMS message, an MMS message, an e-mail, and

a push notification transmitted to the second user device.

In one embodiment, the selection information may include a receipt selected to be submitted and information on at least one recipient who receives the selected receipt, wherein the transmitting of the notification information may include transmitting the notification information to the second user device corresponding to the information on the recipient.

In one embodiment, the transmitting of the notification information may further include inquiring a user database stored in advance using the information on the recipient to specify the second user device corresponding to the information on the recipient.

The method for managing usage of a corporate card according to one embodiment may further include transmitting, by the management service server, a user list created based on the user database to the first user device, prior to receiving the selection information. The information on the recipient may include the selection information on at least one user of the user list.

The method for managing usage of a corporate card according to one embodiment may further include: prior to receiving the selection information, receiving, by the management service server, taxation type information on each used place of the usage details of the corporate card from a national tax service server; and transmitting, by the management service server, the taxation type information to the first user device.

The method for managing usage of a corporate card according to one embodiment may further include: prior to receiving the selection information, receiving, by the management service server, transaction item information associated with the usage details of the corporate card from used place of the corporate card; and transmitting, by the management service server, the transaction item information to the

first user device.

According to another embodiment of the present invention, there is provided a method of managing usage of a corporate card including: transmitting a request for usage details of the corporate card from a user device for a user of the corporate card to
5 a server; receiving, by the user device, the usage details of the corporate card from the server; displaying the usage details of the corporate card on the user device; receiving, by the user device, user selection information on the usage details to be submitted for expense processing, based on the usage details of the corporate card displayed on the user device; and transmitting, by the user device, the selection information to the server.

10 In one embodiment, the selection information may include a receipt selected to be submitted and information on at least one recipient who receives the selected receipt.

In one embodiment, the communication unit may further receive a user list created based on a user database of the server, and the selection information may include selection information on at least one of the users.

15 The method for managing usage of a corporate card according to another embodiment may further include: prior to displaying the usage details of the corporate card, receiving, by the user device, taxation type information on each used place of the usage details of the corporate card or transaction item information associated with the usage details of the corporate card from the server. The displaying of the usage details
20 of the corporate card may include displaying the usage details of the corporate card together with the taxation type information or the transaction item information.

According to another embodiment of the present invention, there is provided a computer program which is combined with hardware to execute the methods for managing usage of a corporate card according to the foregoing embodiments and may
25 be stored in a computer readable medium.

【Advantageous Effects】

According to the system and method for managing usage of a corporate card according to one aspect of the present invention, the user of the corporate card can inquire the limit of the corporate card and the usage details in real time through a mobile application (or an app) and can designate the person in charge of expense processing for the inquired usage details of the corporate card and write the usage purpose or the like to easily transmit the corresponding receipt data to the person in charge of expense processing.

In addition, the system and method for managing usage of a corporate card according to an aspect of the present invention can store the receipt, the usage purpose or the like which are selected by the user of the corporate card, in the management service server, and transmit the notification to the designated person in charge of expense processing, such that the person in charge of expense processing may access the management service server to inquire the receipt data of the corporate card.

15 【Description of Drawings】

FIG. 1 is a schematic block diagram of a system for managing usage of a corporate card according to an embodiment of the present invention.

FIG. 2 is a schematic block diagram of a user device for managing usage of a corporate card according to the embodiment of the present invention.

20 FIG. 3 is a schematic flow chart of a method for managing usage of a corporate card according to an embodiment of the present invention.

FIGS. 4 to 7 are images showing an exemplary screen on the user device for managing usage of a corporate card according to embodiments of the present invention.

FIG. 8 is an image showing the exemplary screen on the user device for a
25 person in charge of expense processing connected to the system for managing usage of a

corporate card according to the embodiment of the present invention.

【Mode for Invention】

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

5 FIG. 1 is a schematic block diagram of a system for managing usage of a corporate card according to an embodiment of the present invention.

Referring to FIG. 1, a system 3 for managing usage of a corporate card according to the present embodiment is configured to communicate with a first user device 1 for a user for the corporate card, a card company server 4, and a second user
10 device 6 for a person in charge of expense processing via a wired and/or wireless network 2. According to one embodiment, the system 3 for managing usage of a corporate card is configured to be able to communicate with a national tax service server 5 as well.

Communication methods via the wired and/or wireless network 2 include any
15 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
20 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
25 (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 system 3 for managing usage of a corporate card includes an application service server 31 and a management service server 32. The system and the user device 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.

The application service server 31 and the management service server 32 included in the system 3 for managing usage of a corporate card according to the present embodiment are not necessarily intended to refer to separate devices physically separated from each other. That is, the application service server 31 and the management service server 32 shown in FIG. 1 functionally separate hardware included in the system 3 for managing usage of a corporate card according to an operation performed by the corresponding hardware, and therefore do not necessarily provided independent of each other. Of course, according to the embodiments, the application service server 31 and the management service server 32 may be implemented as

separate servers physically separated from each other.

The application service server 31 communicates with an application (or, app) executed on the first user device 1 for a user of the corporate card to perform functions of the application. The first user device 1 according to the present embodiment is
5 implemented as a form of a smartphone and may communicate with the system 3 for managing usage of a corporate card through the corresponding application in the first user device 1 to perform an inquiry of usage details and a submission of receipts for use management, or the like. However, the form of the first user device 1 is not limited to the smartphone, and the first user device 1 may be implemented as a form of any
10 computing devices such as another mobile communication terminal, a personal computer, a notebook computer, a personal digital assistant (PDA), a tablet, a set-top box for an internet protocol television (IPTV) or the like.

The application service server 31 is configured to receive a request for the usage details of the corporate card from the first user device 1 for the user of the
15 corporate card, receive the usage details of the corporate card from the card company server 4 in response to the received request, and transmit the usage details of the corporate card to the first user device 1. In order to enable the inquiry of the usage details of the corporate card, the user can input account information (e.g., ID and password, official certificate and certificate password, etc.) associated with a card
20 company homepage or the like, or card information such as a card number, an expiration date, and a card validity check code (CVC) of the corporate card to the first user device 1, and then the input information is transmitted to the application service server 31 through the wired and/or wireless network 2 by encrypted communication.

The application service server 31 receives the usage details of the corporate
25 card from the card company server 4 using the received account information or card

information. According to one embodiment, the application service server 31 acquires usage details of the corporate card from the card company server 4 in a scrapping scheme. In the present disclosure, the scrapping refers to a technique of extracting, by the card company server 4, only necessary information from information provided
5 through homepage and taking the extracted information as data. In the scrapping, there are screen scrapping, data scraping or the like depending on the detailed extraction scheme. The application service server 31 is configured to acquire the usage details of the corporate card from the card company server 4 by any known type of scraping techniques.

10 In order to realize real-time inquiry using the scraping, the account information that can be input to the card company server 4 to be inquired is once input by the user, and then stored in the first user device 1 and/or the application service server 31. The application service server 31 acquires the usage details of the corporate card from the card company server 4 in the scraping scheme using the account information which is
15 stored in advance or received from the first user device 1. The scraping by the application service server 31 may be performed periodically, or may be performed in a case in which there is an inquiry request from the first user device 1. The scraped information is stored in the application service server 31 and then transmitted to the first user device 1 in response to the request of the user of the corporate card.

20 In another embodiment, the application service server 31 and the card company server 4 are configured to communicate with each other via a dedicated line to receive the usage details of the corporate card from the card company server 4, which is one of the features of the present embodiment distinguished from the conventional technique of inquiring usage details of a general credit card. In this case, in order to maintain
25 security, the usage details of the corporate card are not stored in the application service

server 31, and the application service server 4 may provide only a temporary communication path for checking only the usage details of the corporate card on the first user device 1. Of course, it is also possible to store the usage details of the corporate card in the application service server 31 and then provide the stored usage
5 details to the first user device 1, like the scraping scheme.

In the present disclosure, the dedicated line refers to a network that exclusively connects the application service server 31 and the card company server 4, not a public network. For example, the dedicated line may be a dedicated line by a software means realized using a virtual private network (VPN) on a TCP/IP protocol based network, or a
10 dedicated line by a hardware means physically connecting the application service server 31 and the card company server 4 using a digital service unit (DSU), a router or the like.

When the usage details of the corporate card are inquired through the dedicated line, the application service server 31 transmits a generated card validity check message to the card company server 4 using the card information when a card is registered first,
15 and when the received card information is authenticated, the card company server 4 transmits, as an answer message, enterprise customer information (e.g., a business registration number, a company name, etc.) to the application service server 31 in response to the authentication. If the above verification process is performed once, the card company server 4 allows a user that have been verified as described above to
20 inquire a limit and usage details of the card through the dedicated line without an additional authentication process.

When the user of the corporate card requests the inquiry of the usage details or limit, the application service server 31 transmits a message requesting the usage details or limit of a specific card to the card company server 4 via the dedicated line, and the
25 card company server 4 similarly transmits the answer message including the usage

details or limit to the application service server 31 via the dedicated line in response thereto. In order to inquire the limit and usage details through the dedicated line, an operator of the system 3 for managing usage of a corporate card and the card company need to be affiliated with each other in advance. Accordingly, the application service
5 server 31 receives the limit and the usage details via the dedicated line when the card to be inquired is a card of an affiliated card company, and can acquire the limit and the usage details in the scraping scheme when the card to be inquired is a card of an unaffiliated card company.

In one embodiment, the application service server 31 may further communicate
10 with the national tax service server 5 to inquire taxation types for each used place of the usage details of the corporate card and further transmit taxation type information for each used place to the first user device 1. In the application executed by the first user device 1, the taxation type information of the used place is displayed together with the usage details of the corporate card, whereby the user of the corporate card can easily
15 understand whether business operators corresponding to each used place are a taxable person or an exempted person, whether the business operators are a general taxpayer or a simplified taxpayer or the like. In addition, the application service server 31 may further inquire whether businesses corresponding to each used place are closed and/or shut down by communicating with the national tax service server 5.

20 The taxation type inquiry and the inquiry about whether a business is closed and/or shut down may be performed in such a manner that the information provided by the national tax service server 5 is scraped by the application service server 31. Alternatively, the taxation type inquiry, the closure and/or shut down of the business may be performed via the dedicated line through which the application service server 31
25 and the national tax service server 5 can communicate with each other. Herein, the

dedicated line may be similar to the above-described dedicated line connecting the application service server 31 and the card company server 4.

Further, in one embodiment, the application service server 31 may receive transaction item information associated with the usage details of the corporate card from
5 a device of a member store corresponding to the used place of the corporate card, and transmit the transaction item information to the first user device 1. For this purpose, the application service server 31 is communicatively connected the member store device via a dedicated line and/or a public network. The application running on the first user device 1 displays the transaction item information along with the usage details of the
10 corporate card. As a result, the user of the corporate card can easily identify which item is specifically associated with each usage detail. As used herein, the transaction item information may include information such as a type, quantity, price and etc. of the item traded using the corporate card.

The user of the corporate card can inquire the limit and/or usage details of the
15 corporate card in real time using the first user device 1, and input the selection information on the usage details to be submitted for expense processing among the inquired usage details to the first user device 1. The selection information may include a receipt corresponding to the usage details to be submitted, a usage purpose and content created by the user in relation to the usage details, and information on a
20 recipient (that is, information on a person in charge of expense processing) who receives the corresponding receipt.

The selection information input by the user is transmitted from the first user device 1 to the management service server 32. The management service server 32 stores the selection information input by the user in a database of the management
25 service server 32, and transmits the notification information to the recipient (i.e., the

person in charge of expense processing) designated by the selection information. The management service server 32 may inquiry the user database stored in advance in the management service server 32 to specify the second user device 6 for a person in charge of expense processing corresponding to the recipient and transmit the notification to the
5 second user device 6. The notification is transmitted to the second user device 6 in a short message service (SMS) message, a multimedia message service (MMS) message, an email, a push notification through an application, or other suitable forms.

The person in charge of expense processing can recognize that there is a receipt requested for expense processing through the notification received by the second user
10 device 6, access the management service server 32 using the second user device 6 to read the usage details stored in the management service server 32, and perform necessary procedures for approval of expense execution such as payment for the expense processing.

FIG. 2 is a schematic block diagram of a user device for managing usage of a
15 corporate card according to the embodiment of the present invention.

The user device according to the present embodiment is used by the user of the corporate card 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 of the units 11-13 shown in FIG. 2
20 functionally divides the user device 1 according to the operation performed for the user device 1 to manage the usage of the corporate card, and does not refer to separate devices physically divided from each other. For example, the display unit 12 and the input unit 13 may be integrated in a touch screen mode for simultaneously performing a display on and an input to the screen.

25 The communication unit 11 is configured to transmit the usage details of the

corporate card request to the server and receive the usage details of the corporate card from the server in real time. The server described in relation to the embodiment shown in FIG. 2 is intended to collectively refer to the application service server 31 and the management service server 32 shown in FIG. 1. Further, the communication unit 11 is
5 configured to transmit account information (e.g., an ID and a password, an authorized certificate and a certificate password, etc.) for scraping, or card information on the corporate card (e.g., a card number, an expiration date, and a CVC) to the server, according to a method for inquiring usage details from the card company.

The display unit 12 is configured to display the usage details of the corporate
10 card received by the communication unit 11, in which the user of the corporate card can look at the usage details of the corporate card displayed on the display unit 12 to select the usage details to be submitted to the person in charge of expense processing, and can input the selection information to the input unit 13. A specific process of selecting and submitting a receipt using a user device according to one embodiment will be described
15 below in detail with reference to FIGS. 4 to 7.

FIG. 3 is a schematic flow chart of a method for managing usage of a corporate card according to an embodiment of the present invention.

Referring to FIG. 3, the user of the corporate card previously inputs, as information related to a corporate card used by the user, the account information (e.g.,
20 an ID and a password, an authorized certificate and a certificate password, etc.) of a card company homepage or the card information (e.g., a card number, an expiration date, and a CVC) to the first user device 1, and the information input by the user is transmitted to the application service server 31 (S1). According to one embodiment, in order to inquire the limit and usage details through the dedicated line, the application
25 service server 31 transmits and receives a message to and from the card company server

4 using the card information received from the first user device 1 to perform the verification on the corresponding card (S2).

However, in another embodiment, if the application service server 31 uses the scraping scheme, the verification process (S2) may be omitted. In this case, the application service server 31 performs the inquiry of the usage details to be described below by the scraping scheme using the account information received from the first user device 1. The account information may be previously transmitted to and stored in the application service server 31, or may be stored in the first user device 1 and then transmitted from the first user device 1 to the application service server 31 each inquiry request.

Thereafter, if the user of the corporate card inquires the usage details using the application, a request for the usage details of the corporate card is transmitted from the first user device 1 to the application service server 31 (S3). The application service server 31 transmits the request for the usage details to the card company server 4 (S4) to receive the usage details of the corporate card from the card company server 4, and transmits the received usage details to the first user device 1 to display the transmitted usage details on the first user device 1 (S6). As described above, as the scheme of receiving, by the application service server 31, usage details, there may be the scraping scheme using the account information on the card company homepage or the scheme of transmitting and receiving a message through the dedicated line connected to the card company server 4. At this time, the application service server 31 may further inquire the taxation type of the used place corresponding to the usage details or whether a business is closed and/or shut down from the national tax service server, and transmit the inquired contents to the first user device 1. Further, the application service server 31 may further receive transaction item information related to the usage detail from a

member store device corresponding the used place of the corporate card and transmitt the transaction item information to the first user device 1.

Although the steps S3 to S6 of FIG. 3 describe the process of inquiring the usage details of the corporate card, the above process may be similarly applied to the
5 process of inquiring the limit of the corporate card.

In addition, in the above process, the communication between the first user device 1 and the application server 31 is executed by the encrypted communication over the public network. On the other hand, the communication between the application server 31 and the card company server 4 may be executed by the encrypted
10 communication through the public network in a case of the scraping scheme, or may also be executed through the dedicated line through which the application server 31 and the card company server 4 communicate with each other.

The user of the corporate card can check the usage details of the corporate card displayed on the first user device 1 (S7), and input the selection information on the
15 usage details to be submitted for the expense processing to the first user device 1 (S8). FIGS. 4 to 7 are images showing an exemplary screen on the user device for managing usage of a corporate card according to embodiments of the present invention. Referring to FIGS. 4 to 7, the process of displaying the usage details of the corporate card on the user device, and the process of inputting the selection information on the
20 usage details to be submitted to the user device (S7 and S8) will be described in detail.

FIG. 4 shows the screen displaying that the user of the corporate card executes an application on the user device and inquire about the corporate card transaction limit, and information, such as the remaining balance, the spent amount, and the total spent amount, received through communication with the application service server is
25 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 settings. Furthermore, when the user possesses a plurality of corporate cards, a drop-down element 405 for selecting a corporate card to inquire may be displayed on the screen. However, it will
5 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 interface element 402 on the screen shown in FIG. 4. The corporate card payments 501-504, 511 and 512 inquired through communication with the application service
10 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 corporate cards, the payments may be displayed for each card.

In an embodiment, payments 501-504 for which the user of the corporate card
15 has already submitted receipts for expense processing and payments 511, 512 for which the user of the corporate card 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
20 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 6d show screens displaying a process in which the user of the corporate card inputs selection information to submit a receipt for a particular payment.

25 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 application service server further receives taxation type information of the corresponding merchant by communicating with the national tax organization server and transmits the information to the user device, 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. Further, although not illustrated, transaction item information related to the payment is further received at the application service server from a member store device corresponding to the used place of the corporate card, and the transaction item information may be further displayed on the user device as a part of the detailed information about the payment.

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 user of the corporate card may designate one or more users in the received user list as a recipient.

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 user of the corporate card using the relationship information and present it to the user device, allowing the user of the corporate card to easily select an expense processing clerk related to the user.

For example, the user database may store company information to which each
5 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 user of the corporate card requesting receipt submission to the user device, allowing the user to identify a receipt recipient from the related user list.

Alternatively, the user database may include online contact information that is
10 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 user of the corporate card requesting receipt submission to the user device, allowing the user to identify a receipt recipient from his/her online contact.

When the user of the corporate card selects the recipient of the receipt, a
15 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 user of the corporate card
20 inputs all necessary information, the 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 transmission to the management service server.

Although FIGS. 4 through 6 show the screen in the case where the user of the
25 corporate card 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.

FIGS. 7a and 7b show exemplary screens therefor, and if the user of the corporate card has submitted receipts before, clerk information 700 having received receipts from the corresponding user before may be displayed on the detailed inquiry screen of the payment as shown in FIG. 7a. The user of the corporate card 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 user of the corporate card 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 again to FIG. 3, the selection information input by the user of the corporate card using the first user device 1 is transmitted to the management service server 32 (S9). In the management service server 32, the received selection information is built in database and stores in the management service server 32 (S10), and the notification information is transmitted to the second user device 6 for the person in charge of expense processing designated as a recipient by the selection information (S11). The notification information is transmitted to the second user device 6 in the form of the SMS, MMS, e-mail, and push notification through the application or the like so that the person in charge of expense processing can recognize that there is the receipt submitted for expense processing. The management service server 32 may inquire a user database using the information on the recipient designated by the selection information to specify necessary information such as a mobile phone number of the person in charge of expense processing to be received or an e-mail address, and transmit

the notification information using the information.

The person in charge of expense processing who receives the notification information may access the management service server 32 using the second user device 6 to check a receipt and information related thereto that are received and stored in the management service server 32 (S32). At this time, the management service server 32 serves as a web server that provides a predetermined web page capable of allowing the person in charge of expense processing to perform the expense processing such as reading of the receipt, and payment and approval of the usage details with the receipt submitted thereto.

FIG. 8 is an image showing the exemplary screen on the user device for a person in charge of expense processing connected to the system for managing usage of a corporate card according to the embodiment of the present invention.

Referring to FIG. 8, the person in charge of expense processing may access the management service server of the system for managing usage of a corporate card to read the selection information received by him/her as a recipient. The selection information may include information such as receipts submitted by each user of the corporate card, users corresponding to the corresponding recipients, use date and time, an amount of money used, customers, and usage purposes and/or contents. The person in charge of expense processing may read the usage details of all users of a corporate card at a time, inquire a user status of the card, or separately read usage details of an individual user. In addition, it is also possible for the person in charge of expense processing to perform management tasks such as registering a corporate card held by a company and designating a user.

The operation by the method for processing usage information of a corporate 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 corporate 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. Therefore, the true technical scope of protection of the present disclosure should be defined by the technical spirit of the appended claims.

【Industrial Applicability】

Embodiments relate to a system, a method, and a computer program for managing usage of a corporate card, and more particularly, to a technique that allows a user of the corporate card to inquire usage details in real time and easily transmit the inquired usage details to a person in charge of expense processing.

【CLAIMS】

【Claim 1】

A system for managing usage of a corporate card, the system comprising:

an application service server configured to receive a request for usage details of the corporate card from a first user device for a user of the corporate card, receive the usage details of the corporate card from a card company server in response to the
5 received request, and transmit the usage details of the corporate card to the first user device; and

a management service server configured to receive selection information on at least one usage detail to be submitted for expense processing among the usage details of the corporate card from the first user device, store the selection information, and
10 transmit notification information corresponding to the selection information to a second user device for a person in charge of expense processing,

wherein the application service server is further configured to:

determine whether a card to be inquired for the usage details of the corporate card is a card of an affiliated card company,

15 when the card to be inquired is a card of an affiliated card company, receive the usage details of the corporate card from the card company server via a dedicated line through which the application service server and the card company server is communicatively coupled, wherein the application service server is configured to transmit, before receiving the usage details of the corporate card, a card validity check
20 message to the card company server, receive an answer message in response to the card validity check message from the card company server, and, after receiving the answer message, receive the usage details of the corporate card from the card company server without an additional authentication process, and wherein the usage details of the

corporate card received through the dedicated line is not stored in the application service server, and

when the card to be inquired is a card of an unaffiliated card company, receive an account information from the first user device in response to the request, and receive
5 the usage details of the corporate card from the card company in a scraping scheme using the received account information, and

wherein the management service server is further configure to provide the selection information such that the second user device that received the notification information can access the management service server and read the selection
10 information.

【Claim 2】

The system for managing usage of a corporate card according to claim 1, wherein the notification information comprises at least one of a short message service
15 (SMS) message, a multimedia message service (MMS) message, an e-mail, and a push notification transmitted to the second user device.

【Claim 3】

The system for managing usage of a corporate card according to claim 1,
20 wherein the selection information comprises a receipt selected to be submitted and information on at least one recipient who receives the selected receipt, and

wherein the management service server is further configured to transmit the notification information to the second user device corresponding to the information on the recipient.

25

【Claim 4】

The system for managing usage of a corporate card according to claim 3,
wherein the system further comprises a user database in which a plurality of
pieces of user information is stored, and

5 wherein the management service server is further configured to inquire the user
database using the information on the recipient to specify the second user device
corresponding to the information on the recipient.

【Claim 5】

10 The system for managing usage of a corporate card according to claim 4,
wherein the management service server is further configured to transmit a user
list created based on the user database to the first user device, and

wherein the information on the recipient comprises selection information on at
least one user of the user list.

15

【Claim 6】

The system for managing usage of a corporate card according to claim 1,
wherein the management service server is further configured to receive taxation type
information on each used place of the usage details of the corporate card from a national
20 tax service server, prior to receiving the selection information, and to transmit the
taxation type information to the first user device.

【Claim 7】

A method for managing usage of a corporate card, the method comprising:
25 receiving, by an application service server, a request for usage details of the

corporate card from a first user device for a user of the corporate card;

receiving, by the application service server, the usage details of the corporate card from a card company server in response to the received request for the usage detail of the corporate card;

5 transmitting, by the application service server, the usage details of the corporate card to the first user device;

receiving, by a management service server, selection information on at least one usage detail to be submitted for expense processing among the usage details of the corporate card from the first user device;

10 storing the selection information in the management service server;

transmitting, by the management service server, notification information corresponding to the selection information to a second user device for a person in charge of expense processing; and

providing, by the management service server, the selection information such
15 that the second user device that received the notification information can access the management service server and read the selection information,

wherein the receiving the usage details of the corporate card comprises:

determining, by the application service server, whether a card to be inquired for the usage details of the corporate card is a card of an affiliated card company;

20 when the card to be inquired is a card of an affiliated card company, receiving the usage details of the corporate card from the card company server via a dedicated line through which the application service server and the card company server is communicatively coupled; and

when the card to be inquired is a card of an unaffiliated card company,
25 receiving an account information from the first user device in response to the request,

and receiving the usage details of the corporate card from the card company in a scraping scheme using the received account information,

wherein the receiving the usage details of the corporate card from the card company server via a dedicated line comprises:

5 transmitting, by the application service server, a card validity check message to the card company server;

 receiving, by the application service server, an answer message in response to the card validity check message from the card company server; and

 receiving, by the application service server, the usage details of the corporate
10 card from the card company server without an additional authentication process after receiving the answer message, and

 wherein the usage details of the corporate card received through the dedicated line is not stored in the application service server.

15 **【Claim 8】**

 The method for managing usage of a corporate card according to claim 7, wherein the transmitting of the notification information comprises transmitting at least one of an SMS message, an MMS message, an e-mail, and a push notification transmitted to the second user device.

20

【Claim 9】

 The method for managing usage of a corporate card according to claim 7, wherein the selection information comprises a receipt selected to be submitted and information on at least one recipient who receives the selected receipt, and

25 wherein the transmitting of the notification information comprises transmitting

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

【Claim 10】

5 The method for managing usage of a corporate card according to claim 7, wherein the transmitting of the notification information further comprises inquiring a user database stored in advance using the information on the recipient to specify the second user device corresponding to the information on the recipient.

10 **【Claim 11】**

 The method for managing usage of a corporate card according to claim 10, wherein the method further comprises transmitting, by the management service server, a user list created based on the user database to the first user device, prior to receiving the selection information,

15 wherein the information on the recipient comprises selection information on at least one user of the user list.

【Claim 12】

 The method for managing usage of a corporate card according to claim 7,
20 further comprising:

 prior to receiving the selection information,

 receiving, by the management service server, taxation type information on each used place of the usage details of the corporate card from a national tax service server;
and

25 transmitting, by the management service server, the taxation type information to

the first user device.

【Claim 13】

A computer program stored in a computer readable medium, the computer
5 program is to execute, in combination with a hardware, the method for managing usage
of a corporate card according to any one of claims 7 to 12.

【Claim 14】

The system for managing usage of a corporate card according to claim 1,
10 wherein management service server is further configured to, prior to receiving the
selection information, receive transaction item information associated with the usage
details of the corporate card from used place of the corporate card and transmit the
transaction item information to the first user device.

15 **【Claim 15】**

The method for managing usage of a corporate card according to claim 7, the
method further comprising:

prior to receiving the selection information,

receiving, by the management service server, transaction item information
20 associated with the usage details of the corporate card from used place of the corporate
card; and

transmitting, by the management service server, the transaction item
information to the first user device.

25