DESCRIPTION

PERSONAL INFORMATION ACQUISITION SYSTEM AND PERSONAL INFORMATION ACQUISITION METHOD

TECHNICAL FIELD

[0001]

The present invention relates to a personal information acquisition system and a personal information acquisition method.

BACKGROUND ART

[0002]

As portable terminals, such as tablet terminals, have been widespread, presentations of financial commodities and contract operations through use of terminals carried to customers' places have been performed. What is called customer face-to-face business activities as described above requires secure execution of procedures of important matter explanation and customers' intention confirmation for contracts. The procedures are important not only in an aspect of conforming with laws and ordinances but also in an aspect of addressing events, such as unilateral breach of contract and ex post denial of intention of contract, which may be possibly made by a customer in the future. A method of saving the history thereof has also been proposed.

[0003]

That is, in a form of face-to-face sales of commodities, a system and the like have been proposed that allow a sales counter terminal to record, in a database, motion information indicating the fact that commodities to be sold are explained by a person in charge at a sales counter, and print the motion information recorded in this database on a description of commodities for sale, in order to store, as a record, explanation that pertains to items for sale and has been already conducted and its situations (see Patent Literature 1).

CITATION LIST

PATENT LITERATURE

[0004]

PATENT LITERATURE 1: JP-A-2009-122796

SUMMARY OF INVENTION

TECHNICAL PROBLEM

[0005]

Unfortunately, a tablet terminal used at a customer's place has limitations on data processing capability, storage capacity, or various interface specifications, due to the portability. It is difficult to comprehensively record a wide range of events during face-to-face sales including the aforementioned important procedures and freely output the events. On the other hand, if an external device, such as a biological information reader, is connected to a tablet terminal and a recording operation and the like are executed in order to make up for the drawback, the portability of the tablet terminal is degraded, and unnecessary psychological pressure could be exerted on a customer during sales talk. Furthermore, additional cost for introducing the external device occurs, and efforts for managing the device increase, which is prone to causing a problem of increasing business cost and reducing the business efficiency.

[0006]

Thus, the present invention has an object to provide a technique of efficiently acquiring evidence of prescribed motions of customers including their intentions at low cost during face-to-face sales using the tablet terminal.

SOLUTION TO PROBLEM

[0007]

A personal information acquisition system of the present invention for solving the above problems is a tablet terminal including: an image-capturing device and a touch panel; a storage device that stores each piece of information on a business flow of face-to-face sales activities pertaining to a financial commodity, and content according to the business flow; and an arithmetic device that executes an advance-or-retreat process of the business flow according to an input event through the touch panel, and a process of displaying content of the procedure reached by the advance-or-retreat process on the touch panel, and causes the image-capturing device to execute photographing of a face image of a customer with whom face-to-face sales are to be conducted when a specific procedure in the business flow is reached, associates the face image with information on the specific procedure and information on the customer, and stores the associated image in the storage device.

[0008]

In addition, a personal information acquisition method of the present invention causes a tablet terminal that includes an image-capturing device and a touch panel, and a storage

device that stores each piece of information on a business flow of face-to-face sales activities pertaining to a financial commodity, and content according to the business flow to execute:

an advance-or-retreat process of the business flow according to an input event through the touch panel; a process of displaying content of a procedure reached by the advance-or-retreat process on the touch panel; and a process of causing the image-capturing device to execute photographing of a face image of a customer with whom face-to-face sales are to be conducted when a specific procedure in the business flow is reached by the advance-or-retreat process, of associating the face image with the specific procedure and information on the customer, and of storing associated image in the storage device.

ADVANTAGEOUS EFFECTS OF INVENTION

[0009]

The present invention can efficiently acquire evidence of prescribed motions including their intentions of customers at low cost during face-to-face sales using the tablet terminal.

BRIEF DESCRIPTION OF DRAWINGS

[0010]

[FIG. 1] Fig. 1 is a diagram showing a configuration example of a network including a tablet terminal that is a personal information acquisition system of this embodiment.

[FIG. 2] Fig. 2 is a diagram showing a configuration example of hardware of the tablet terminal of this embodiment.

[FIG. 3] Fig. 3 is a diagram showing a configuration example of an application table of this embodiment.

[FIG. 4] Fig. 4 is a diagram showing a configuration example of a log table of this embodiment.

[FIG. 5] Fig. 5 is a diagram showing a configuration example of a customer table of this embodiment.

[FIG. 6] Fig. 6 is a flowchart showing an example of processing procedures of a personal information acquisition method of this embodiment.

[FIG. 7] Fig. 7 is a diagram showing a screen example 1 in this embodiment.

[FIG. 8] Fig. 8 is a diagram showing a screen example 2 in this embodiment.

DESCRIPTION OF EMBODIMENTS

[0011]

Embodiments of the present invention are hereinafter described with reference to the drawings. Fig. 1 is a diagram showing an example of a network configuration including a tablet terminal 100 that is a personal information acquisition system of this embodiment. The tablet terminal 100 that is the personal information acquisition system shown in Fig. 1 is a computer terminal for efficiently acquiring evidence of prescribed motions of customers including their intentions during face-to-face sales using the tablet terminal 100. The tablet terminal 100 is a terminal carried to customers' places by a person in charge of a financial institution who conducts face-to-face sales activities pertaining to the financial institution.

[0012]

It is thus a matter of course that the tablet terminal 100 includes each of data items on a business flow preliminarily designed for face-to-face sales activities of financial commodities and accompanying content (screen data, audio data and the like). The terminal allows advance and return control of procedures that includes advancement or return of the business flow according to an operation by a person in charge or a customer, and an accompanying output content switching process.

[0013]

As exemplified in Fig. 1, the tablet terminal 100 held by each person in charge can communicate with a financial institution server 200 via a network 20. Alternatively, a communication interface of the tablet terminal 100 and the financial institution server 200 may be directly connected to each other via a cable for communication, instead of the network 20. The financial institution server 200 is a server apparatus managed and operated in a financial institution office to which the person in charge in the financial institution belongs. The financial institution server 200 manages various pieces of information pertaining to each customer (ID, name, address, account number, balance of the account, credit information, etc.) in a prescribed storage device, and reads the information on the customer concerned and provides the information for the tablet terminal 100 in response to a request. The financial institution server 200 also has a function of acquiring, from the tablet terminal 100, result information on face-to-face sales activities at a customer's place, and of associating the information with the record of the customer concerned in the storage device and of storing the associated information.

[0014]

Meanwhile, the person in charge in the financial institution visiting a customer's place while holding the tablet terminal 100 causes the tablet terminal 100 to display commodity explanation information pertaining to financial commodities for the customer the person in

charge faces. This improves the degree of commodity understanding of the customer. Finally, conclusion of contract of the commodity concerned is intended. Note that sales of such financial commodities include specific procedures necessary in view of laws and ordinances, such as important matter explanation, and final confirmation of a customer's intention at the time of contract. Appropriate consideration therefor is required. As to such specific procedures, it is important to preserve evidence so as to securely address occurrence of a possible event, such as ex post denial of an intention having been expressed by the customer during face-to-face sales.

[0015]

The hardware configuration of such a tablet terminal 100 is as follows. Fig. 2 is a diagram showing a configuration example of the hardware of the tablet terminal 100 of this embodiment. The tablet terminal 100 according to this embodiment includes: a storage device 101 made up of an appropriate nonvolatile storage device, such as SSD (Solid State Drive) or a hard disk drive; a memory 103 made up of a volatile storage device, such as RAM; an arithmetic device 104, such as a CPU, which reads a program 102 held in the storage device 101 into the memory 103 to execute the program and integrally controls the terminal itself, and performs various determinations, operations and control processes; an image-capturing device 105 provided originally, integrally with a casing; a touch panel 106; a communication device 107 that is connected to a network 10 and is responsible for a communication process with the financial institution server 200; and a microphone 108 (audio input device).

[0016]

In addition to the program 102 for implementing functions required for the tablet terminal 100 that is the personal information acquisition system of this embodiment, data items required for various processes are stored in the storage device 101. The data items include an application table 125, a log table 126, and business flow data 150 (the business flow, and content according to the business flow). The business flow data 150 is analogous to that having already proposed for an existing business supporting system and the like. Consequently, description on the specific data structure is omitted.

[0017]

A specific example of the structure of the application table 125 among the tables held in the storage device 101 by the tablet terminal 100 is shown in Fig. 3. The application table 125 is a table that stores the content of each of transactions reaching the specific procedures, such as the important matter explanation and the final confirmation of customer's intention accompanying contract application, according to advancement of the business flow

through face-to-face sales activities. The application table 125 exemplified in Fig. 3 is an aggregation of records that each associates, with each other, an application ID uniquely issued for a transaction reaching the specific procedure, a transaction ID that identifies the transaction, application data the customer concerned wishes, data on a face image of the customer that accompanies the important matter explanation, data on a face image of the customer that accompanies the final confirmation of customer's intention in the contract application, an electronic signature attached to each face image, a verification result with reference to a verification reference image, recorded audio data captured by recording conversations between the person in charge and the customer during the face-to-face sales concerned through the microphone 108.

[0018]

In the application table 125 in Fig. 3, the record having an application ID "0002" stores a face image of the customer "im015.dat" accompanying the important matter explanation. On the contrary, a face image of the customer accompanying the final confirmation of customer's intention is not stored. A verification result field with reference to the verification reference image is "NG". This means that the tablet terminal 100 has successfully taken a face image of the customer accompanying the important matter explanation but the image does not match against the verification reference image having preliminarily been acquired about the customer concerned, and a fraud has been estimated, which has prevented advancement to the contract application procedure that is a procedure after the procedure of the important matter explanation.

[0019]

As shown in Fig. 4, the log table 126 is a table storing data that includes the transition of procedures of each transaction, the starting and finishing times of each procedure, the state of photographing a face image of the customer and conversational audio recording at the occasion. Such a log table 126 is an aggregation of records that adopt the time of occurrence of each procedure as a key and associate data items, with each other, the data items including the transaction ID concerned, a customer ID, procedures, the state of photographing a face image of the customer according to the verification reference image and the specific procedure, an image file of the face image acquired at the occasion, situations of recording conversational audio between the person in charge and the customer, and an audio file acquired at the occasion.

[0020]

In the example of the log table 126 shown in Fig. 4, records are registered according to each of procedures performed for the transaction with the transaction ID "t001",

that is, each transition of procedures "Start business flow. Start commodity explanation" -> "Finish commodity explanation" -> "Start important matter explanation" -> "Finish important matter explanation" -> "Accept confirmation button, photograph face image" -> "Start confirmation of application details" -> ....

[0021]

In the procedure "Start business flow. Start commodity explanation", the tablet terminal 100 searches the storage device 101 and detects that any verification reference image pertaining to the customer ID "u001" is not held. Consequently, it is indicated that in the procedure, a verification reference image is photographed to acquire an image file "b001.dat". The procedure "Accept confirmation button, photograph face image" indicates that requirements for the face image of the customer photographing (the entire face is accommodated in photographing frame lines, and the focus is achieved) of which the tablet terminal 100 has notified the customer has been satisfied, and the confirmation button for a customer's intention has been pressed to thereby acquire a face image of the customer "im001.dat".

[0022]

It is indicated that according to the procedure "Start business flow. Start commodity explanation", audio recording through the microphone 108 was "Start(ed)", the corresponding data was stored in an audio file "sd001s.dat", and the recording was "Continue(d)" even in the following procedures. However, upon the confirmation button for an customer's intention being pressed in the "Accept confirmation button, photograph face image", the tablet terminal 100 deletes what was recorded in the procedures before this "Accept confirmation button, photograph face image" (what was recorded before the time of the important matter explanation finishing procedure, i.e., what was recorded before 2013/3/20 10:49) from the audio file "sd001s.dat", and the recording is continued where the recording target is only the following procedures including the procedure "Accept confirmation button, photograph face image" to acquire a new audio file "sd001.dat".

[0023]

It has already been described that the financial institution server 200 manages customer information. The financial institution server 200 includes a customer table 225 as the customer information, in the storage device. As shown in Fig. 5, the customer table 225 is an aggregation of records that adopt the customer ID as a key and associate the image for verification reference for the face image acquired in relation to the customer, i.e., the verification reference image, with a value, such as the amount of characteristics of the verification reference image. Alternatively, the verification reference image may be the face image data on the

photographed customer concerned before the specific procedure (e.g., the procedures of the important matter explanation and the customer's intention confirmation at the time of contract) acquired from the tablet terminal 100 via the network 10 during the face-to-face sales activities and stored. In the example of the customer table 225 shown in Fig. 5, for the customer with the customer ID "u001", the verification reference image has not been stored yet. On the other hand, for the customer with the customer ID "u002" and the customer with the customer ID "u003", the verification reference image has already been stored. This means that in this case, for the customer with the customer ID "u001", during conduct of face-to-face sales activities, the verification reference image is required to be photographed by the tablet terminal 100 before the specific procedure described above.

[0024]

Subsequently, functions included in the tablet terminal 100 of this embodiment are described. As described above, the functions which will be described below may be functions implemented by executing the program 102 included in the tablet terminal 100, for example.

[0025]

The tablet terminal 100 has a function that executes the advance-or-retreat process of the business flow according to an input event through the touch panel 106, and a process of displaying the content of the procedure reached by the advance-or-retreat process on the touch panel 106, and causes the image-capturing device 105 to execute photographing of a face image of the customer with whom face-to-face sales are to be conducted when the specific procedure in the business flow is reached, associates the face image with the information on the specific procedure and the information on the customer (the customer ID and the like with which an input is received from the person in charge or the customer when the business flow is started), and stores the associated items in the application table 125 and the log table 126 in the storage device 101. The face image is stored in a secure storage region provided in the storage device 101 of the tablet terminal 100 so as not to be accessed by what is other than the application responsible for the process in the personal information acquisition method of this embodiment. A similar concept of managing such a face image (including the amount of characteristics) is also applied to handling of the verification reference image and the amount of characteristics in the financial institution server 200.

[0026]

The tablet terminal 100 further has a function that applies an encryption process according to a prescribed encryption algorithm and a process of attaching an electronic

certificate to the face image of the customer photographed by the image-capturing device 105 as described above, the specific procedure triggering the face image photographing, and at least the face image in the information on the customer, and subsequently stores the processed items in the application table 125 and the log table 126 of the storage device 101.

[0027]

The tablet terminal 100 further has a function that displays notification information on photographing of a face image and a photographing frame on the touch panel 106 and displays, in the photographing frame, an in-photographing image of the customer by the image-capturing device 105 when the specific procedure such as the important matter explanation is reached by the advance-or-retreat process, and activates the intention confirmation button for the customer with respect to the specific procedure and displays the button on the touch panel 106 when an image recognition process (an existing algorithm may be used) determines that the contours of the face of the customer concerned accommodated in the photographing frame and the state is in an in-focus state.

[0028]

The tablet terminal 100 further has a function that acquires the face image of the customer accommodated in the photographing frame from the image-capturing device 105 when the intention confirmation button is pressed at the touch panel 106, and associates the face image with the specific procedure and the information on the customer concerned and stores the associated items in the application table 125 and the log table 126.

[0029]

The tablet terminal 100 further has a function that causes the image-capturing device 105 to acquire by photographing the face image of the customer, or acquires the image from an external medium via a prescribed interface or from the financial institution server 200, at least at any time until the time when the specific procedure is reached, and stores the image as the verification reference image for the customer concerned in the application table 125 and the log table 126 in the storage device 101.

[0030]

The tablet terminal 100 further has a function that verifies the image of the customer acquired through the face image photographing upon the specific procedure being reached against the verification reference image of the customer concerned, and associates the face image of the customer concerned and at least the face image of the verification result with the specific procedure and the information on the customer concerned when both the images match with each other and stores the associated items in the application table 125 and the log

table 126 of the storage device 101.

[0031]

Furthermore, the tablet terminal 100 includes a function that continuously records, through the microphone 108, conversational audio occurring between the person in charge and the customer during face-to-face sales after the start of the business flow or a prescribed time, stores the recorded audio data together with the information on the customer concerned and the recording time in the application table 125 and the log table 126 in the storage device 101, and deletes the audio data recorded in relation to the customer concerned at the execution time of the procedures before the specific procedure concerned, when the specific procedure is reached and face image photographing is executed by the image-capturing device 105.

[0032]

Actual procedures for acquiring a personal information acquisition method of this embodiment are hereinafter described with reference to the drawings. Various operations corresponding to the personal information acquisition method described later is actualized by the program 102 read from the memory 103 and executed by the tablet terminal that is the personal information acquisition system. Such a program 102 includes code for executing various operations described below.

[0033]

Fig. 6 is a flowchart showing an example of processing procedures of the personal information acquisition method of this embodiment. Situations are herein assumed where the tablet terminal 100 is carried by the person in charge in the financial institution to a customer's place, and the business flow of the face-to-face sales activities with the customer concerned is started. It is further assumed that the tablet terminal 100 has already accepted, through the touch panel 106, input about information pertaining to the customer concerned during face-to-face sales with the person in charge in the financial institution, i.e., the customer ID, the name and the like. According to start of the business flow, the tablet terminal 100 detects the starting and finishing times of each procedure in the business flow using a time function and the like of this terminal, associates the time information with the procedures concerned, and consecutively stores the associated items in the log table 126.

[0034]

The tablet terminal 100 in the situations as described above issues numbers for the transaction ID pertaining to the face-to-face sales this time with the customer concerned according to a prescribed algorithm, generates a corresponding record in the application table

125 and the log table 126 of the storage device 101, and further starts recording the conversational audio between the person in charge in the financial institution and the customer concerned through the microphone 108 (s100). The audio data acquired by this recording is stored together with the customer ID of the customer concerned and the information on the recording time, in the application table 125 and the log table 126 in the storage device 101.

[0035]

According to the aforementioned step s100, the tablet terminal 100 adopts the customer ID of the customer concerned as a key in its storage device 101, executes file search for the verification reference image, and identifies presence or absence of the verification reference image of the customer concerned (s101). As a result of the process, when the verification reference image cannot be identified in relation to the customer concerned (s102: n), the tablet terminal 100 activates the image-capturing device 105, photographs a face image of the customer concerned, and stores the photographed image as the verification reference image for the customer concerned in the application table 125 and the log table 126 in the storage device 101 (s103). The process of photographing the verification reference image is executed with reference to standards required for photographing the face image of the customer according to the specific procedure, such as "important matter explanation", "customer's intention confirmation at the time of contract" and the like, described later.

[0036]

Subsequently, the tablet terminal 100 repeatedly executes an advance-or-retreat process of the aforementioned business flow according to an input event through the touch panel 106, and a process of displaying, on the touch panel 106, the content of the procedures reached by the advance-or-retreat process, and, for example, it is assumed that the commodity explanation of the financial commodities has been finished (s104). Here, for example, it is assumed that the customer concerned determines the intention of the contract application about the financial commodities on which commodity explanation has been made, and performs an instruction of starting the contract application through the touch panel 106 of the tablet terminal 100.

[0037]

In this case, as the tablet terminal 100 receives an instruction of starting the contract application, this terminal assigns the application ID according to a prescribed algorithm, associates the ID with the record with the transaction ID concerned having already been generated in the application table 125 and the log table 126 in the aforementioned step s100 (s105). The tablet terminal 100, which has thus recognized the situations where the intention of

the contract application by the customer has been determined, causes the procedure in the business flow to transition to the procedure of the important matter explanation pertaining to the financial commodities concerned, and displays the content for important matter explanation on the touch panel 106 (s106).

[0038]

The procedure of important matter explanation is the specific procedure having important meaning in the business flow. Consequently, an identifier, such as a flag, is preset in the business flow data 150 in relation to the procedure. Upon transition to the procedure concerned, the tablet terminal 100 can therefore confirm that the specific procedure is reached.

[0039]

According to the transition to the procedure of the important matter explanation, the tablet terminal 100 activates the image-capturing device 105, displays notification information on face image photographing and the photographing frame on the touch panel 106, and displays an in-photographing image of the customer concerned through the image-capturing device 105 in the photographing frame (s107). Fig. 7 shows an example of the display screen 700 including notification information 701 on face image photographing and the photographing frame 702 on the touch panel 106. The display screen 700 includes each of objects that are a message "*After confirmation of important matter explanation, please look at the camera with your face being within the photographing frame lines. An image of your face is photographed to prove your understanding of the important matter explanation.", as the notification information 701, the photographing frame 702, the name 703 of the customer concerned, the customer ID 704, the address 705, and target financial commodity and its important matter explanation 706.

[0040]

The customer views the display screen 700 and recognizes the notification information 701, and then reads the important matter explanation 706, and subsequently looks at the image-capturing device 105. The tablet terminal 100 causes the activated image-capturing device 105 to photograph an image of the customer concerned, and displays the photographed image in the photographing frame 702. In an example in Fig. 7, only about half of the face of the customer is accommodated in the photographing frame 702.

[0041]

In such a case, the tablet terminal 100 determines that the contours of the face of the customer concerned is not accommodated in the photographing frame 702 in an image recognition process (an existing algorithm may be used) (s108: n), and displays an intention

confirmation button 710 pertaining to the procedure of the important matter explanation that is the procedure at the present time in an inactivated state on the touch panel 106 (s109). It is preferable that at this time, the tablet terminal 100 should display, on the display screen 700, an alert "Please try to change the direction of the face to accommodate the face within the photographing frame 702".

[0042]

Subsequently, it is assumed that consideration is given so as to accommodate the contours of the own face image within the photographing frame 702. In this case, the tablet terminal 100 determines that the contours of the face of the customer concerned is accommodated in the photographing frame 702 and the state is in an in-focus state (an existing algorithm may be used) (s108: y), and displays an intention confirmation button 710 pertaining to the procedure of the important matter explanation in an activated state on the touch panel 106 (s110). Fig. 8 shows an example of a display screen 800 where an activated intention confirmation button 710 is displayed. In the display screen 800 in Fig. 8, the entire contours of the face image of the customer concerned are accommodated in the photographing frame 702, and the focus is achieved. The intention confirmation button 710 is in an activated state allowing the button to be pressed.

[0043]

In such situations, the tablet terminal 100 waits for pressing of the intention confirmation button 710 for a certain time period, and in the case without a pressed event even after the certain time period has elapsed (s111: n), data on the face image of the customer concerned in the photographing frame 702 is deleted (s112) and the transaction this time is finished.

[0044]

On the contrary, in the case of receipt of the pressing of the intention confirmation button 710 through the touch panel 106 before the lapse of the certain time period (s111: y), the tablet terminal 100 acquires the face image of the customer concerned accommodated in the photographing frame 702 from the image-capturing device 105, and verifies the face image of the customer concerned acquired here against the verification reference image of the customer concerned (e.g., held in the log table 126) (s113). In conformity with this step s113, the audio data recorded in relation to the customer concerned at the execution time of the procedures before the procedure of the important matter explanation is deleted (s114).

[0045]

Subsequently, when both the image match with each other in the verification

process in step s113 (s115: y), the tablet terminal 100 applies the encryption process according to the prescribed encryption algorithm and the process of attaching the electronic certificate to the face image of the customer concerned, subsequently associates the image with the verification result and the specific procedure concerned, that is, the procedure of the important matter explanation and the information on the customer concerned, and stores the associated items in the application table 125 and the log table 126 in the storage device 101 (s116). On the contrary, when both the images do not match with each other in the verification process in step s113 (s115: n), the tablet terminal 100 estimates a fraud and finishes the processes thereafter.

[0046]

Subsequently, as with the process accompanying the procedure of the important matter explanation, every time of transition to the specific procedure along the advancement of the business flow, the process of photographing of the face image of the customer is repeatedly executed.

[0047]

The face image of the customer and the data on the verification result which have thus been stored in the application table 125 and the log table 126 is transmitted with the application details and log data to the financial institution server 200 at appropriate timing. The financial institution server 200 stores the thus acquired face image of the customer and the like as evidence of the intention of the customer pertaining to the transaction, and manages the image for provision for situations thereafter.

[0048]

This embodiment indicates that the audio data pertaining to the conversation between the person in charge in the financial institution and the customer is recorded with the face image. Alternatively, instead of the audio data, video data may also be processed in an analogous manner.

[0049]

The best mode for implementing the present invention and the like has been specifically described. However, the present invention is not limited thereto, and can be variously changed in a range without departing the gist thereof.

[0050]

This embodiment can efficiently acquire evidence of prescribed motions including their intentions of customers at low cost during face-to-face sales using the tablet terminal.

[0051]

The details of this Description clarify at least the followings. That is, in the personal information acquisition system of this embodiment, the arithmetic device applies the encryption process and the process of attaching the certificate to the face image, the specific procedure, and at least the face image in the information on the customer, and stores the image in the storage device.

[0052]

Consequently, evidence that serves as effective grounds against breach of contract and ex post denial of an intention of contract by the customer can be managed as authorized evidence without falsification.

[0053]

In the personal information acquisition system, the arithmetic device executes: a process that displays notification information on photographing of the face image and a photographing frame on the touch panel and displays, in the photographing frame, an in-photographing image of the customer by the image-capturing device when the specific procedure is reached by the advance-or-retreat process, and activates an intention confirmation button for the customer with respect to the specific procedure and displays the button on the touch panel; and upon receipt of pressing of the intention confirmation button, acquires the face image of the customer accommodated in the photographing frame from the image-capturing device, associates the face image with the specific procedure and information on the customer, and stores the associated image in the storage device.

[0054]

In the specific procedure, such as the important matter explanation or contract process, this system can achieve the business flow control that allows the customer to clearly recognize the importance through displaying the notification information and photographing a face image at a prescribed accuracy, and accepts the confirmation of intention only when the face image securely having a sufficient quality for evidence.

[0055]

In the personal information acquisition system, at least at any time by a time reaching the specific procedure, the arithmetic device acquires the face image of the customer by causing the Image-capturing device to photograph the face image of the customer, or from an external medium via a prescribed interface, and stores the image as a verification reference image for the customer in the storage device, and verifies the image of the customer acquired through the photographing of the face image upon the specific procedure being reached against the verification reference image of the customer, and associates the face image and at least the

face image in the verification result with the specific procedure and the information on the customer when both the images match with each other, and stores the associated images in the storage device.

[0056]

This system can securely detect a fraud where the customer with whom face-to-face sales activities are to be conducted is a person different from a photographing object of the verification reference image, and eliminate the fraud.

[0057]

The personal information acquisition system further includes an audio input device, wherein the arithmetic device continuously records, through the audio input device, audio during face-to-face sales after start of the business flow or a prescribed time, stores the recorded audio data together with information on the customer and recording time in the storage device, and deletes the audio data recorded in relation to the customer at an execution time of procedures before the specific procedure, when the specific procedure is reached and the photographing of the face image of the customer is executed by the image-capturing device.

[0058]

This system can securely store not only the face image but also conversational audio during face-to-face sales while allowing a process of leaving only required portions of audio data that is prone to have a large data size. In tablet terminals that often have limited storage capacities, reduction in data size of an object to be stored can avoid a case and the like where data cannot be stored owing to the storage capacity during business activities and the business activities themselves are impeded.

REFERENCE SIGNS LIST

[0059]

10	Network
100	Tablet terminal (personal information acquisition system)
101	Storage device
102	Program
103	Memory
104	Arithmetic device
105	Image-capturing device
106	Touch panel
107	Communication device

108	Microphone (audio input device)
125	Application table
126	Log table
150	Business flow data
200	Financial institution server
225	Customer table

CLAIMS

[CLAIM 1] A personal information acquisition system that is a tablet terminal, comprising:

an image-capturing device and a touch panel;

a storage device that stores each piece of information on a business flow of face-to-face sales activities pertaining to a financial commodity, and content according to the business flow; and

an arithmetic device that executes an advance-or-retreat process of the business flow according to an input event through the touch panel, and a process of displaying content of the procedure reached by the advance-or-retreat process on the touch panel, and causes the image-capturing device to execute photographing of a face image of a customer with whom face-to-face sales are to be conducted when a specific procedure in the business flow is reached, associates the face image with information on the specific procedure and information on the customer, and stores the associated image in the storage device.

[CLAIM 2] The personal information acquisition system according to claim 1,

wherein the arithmetic device applies an encryption process and a process of attaching a certificate to the face image, the specific procedure, and at least the face image in information on the customer, and stores the images and procedure in the storage device.

[CLAIM 3] The personal information acquisition system according to claim 1,

wherein the arithmetic device executes:

a process that displays notification information on photographing of the face image and a photographing frame on the touch panel and displays, in the photographing frame, an in-photographing image of the customer by the image-capturing device when the specific procedure is reached by the advance-or-retreat process, and activates an intention confirmation button for the customer with respect to the specific procedure and displays the button on the touch panel; and

upon receipt of pressing of the intention confirmation button, acquires the face image of the customer accommodated in the photographing frame from the image-capturing device, associates the face image with the specific procedure and information on the customer, and stores the associated image in the storage device.

[CLAIM 4] The personal information acquisition system according to claim 1,

wherein at least at any time by a time reaching the specific procedure, the arithmetic device acquires the face image of the customer by causing the Image-capturing device to photograph the face image of the customer, or from an external medium via a prescribed interface, and stores the image as a verification reference image for the customer in the storage

device, and

verifies the image of the customer acquired through the photographing of the face image upon the specific procedure being reached against the verification reference image of the customer, and associates the face image and at least the face image in the verification result with the specific procedure and the information on the customer when both the images match with each other, and stores the associated images in the storage device.

[CLAIM 5] The personal information acquisition system according to claim 1,

further comprising an audio input device,

wherein the arithmetic device continuously records, through the audio input device, audio during face-to-face sales after start of the business flow or a prescribed time, stores the recorded audio data together with information on the customer and recording time in the storage device, and deletes the audio data recorded in relation to the customer at an execution time of procedures before the specific procedure, when the specific procedure is reached and the photographing of the face image of the customer is executed by the image-capturing device.

[CLAIM 6] A personal information acquisition method causing a tablet terminal that includes an image-capturing device and a touch panel, and a storage device that stores each piece of information on a business flow of face-to-face sales activities pertaining to a financial commodity, and content according to the business flow to execute:

an advance-or-retreat process of the business flow according to an input event through the touch panel;

a process of displaying content of a procedure reached by the advance-or-retreat process on the touch panel; and

a process of causing the image-capturing device to execute photographing of a face image of a customer with whom face-to-face sales are to be conducted when a specific procedure in the business flow is reached by the advance-or-retreat process, of associating the face image with the specific procedure and information on the customer, and of storing associated image in the storage device.