DESCRIPTION

INFORMATION TRANSMISSION SYSTEM AND BIOMETRIC INFORMATION PROGRAM

Technical Field

[0001]

The present invention relates to an information transmission system or the like that displays biometric information of a user of a communication terminal.

Background Art

[0002]

Patent Literature 1 and the like propose a biometric information processing device that displays biometric information and the like.

Citation List

Patent Literature

[0003]

Patent Literature 1: JP 2017-205147 A

Summary of Invention

Technical Problem

[0004]

However, notifying other users of biometric information is not sufficiently considered.

[0005]

Therefore, an object of the present invention is to provide an information transmission system or the like that receives notification of biometric information or the like of another user.

Solution to Problem

[0006]

An information transmission system according to the present invention includes a first communication terminal, a second communication terminal, and an information server configured to communicate with the first communication terminal and the second communication terminal.

The second communication terminal includes a biometric information acquisition unit configured to acquire biometric information on a user of the second communication terminal.

The information server records a biometric information database including the biometric information on the user of the second communication terminal and information on a normal range of the biometric information.

A first message including predetermined information is transmitted from the information server to the second communication terminal.

When there is no response from the second communication

terminal to the information server until a first standby time elapses after transmission of the first message, a second message including the predetermined information is transmitted from the information server to the second communication terminal.

The first communication terminal receives a notification of information on presence or absence of the response from the second communication terminal to the information server and/or at least one of the biometric information on the user of the second communication terminal or information on whether the biometric information includes information out of the normal range.

[0007]

When the response cannot be obtained from the second communication terminal even if the information server automatically transmits a message or the like, a notification is given to the first communication terminal. That is, the first communication terminal is notified of biometric information or the like of another user (the user of the second communication terminal). Before said notification is given, automatic message transmission and abnormality confirmation of the biometric information are performed. Therefore, it is possible to suppress unnecessary notification.

[0008]

Preferably, the first message and the second message are generated at predetermined time intervals by any one of the first communication terminal and the information server.

The first message includes information indicating that automatic transmission is performed by any one of the first communication terminal and the information server and includes the predetermined information.

The second message includes information indicating that automatic retransmission is performed by any one of the first communication terminal and the information server and includes the predetermined information.

[0009]

Preferably, a message including the predetermined information among the messages input by the first communication terminal is the first message.

The information server determines whether a message input to the first communication terminal and transmitted from the first communication terminal to the second communication terminal via the information server corresponds to the first message.

The second message is generated by any one of the first communication terminal and the information server.

The second message includes information indicating that automatic retransmission is performed by any one of the first communication terminal and the information server and

includes the predetermined information.

When a time zone in which a moving speed of the second communication terminal is equal to or higher than a speed threshold value is included before the first standby time elapses, the notification to the first communication terminal is not performed.

[0010]

More preferably, when there is no response from the second communication terminal to the information server until a second standby time elapses after the transmission of the second message, a third message including the predetermined information is transmitted from the information server to the second communication terminal.

The third message is generated by any one of the first communication terminal and the information server.

The third message includes information indicating that automatic re-retransmission is performed by any one of the first communication terminal and the information server and includes the predetermined information.

The second communication terminal outputs a reception notification sound for a longer time and/or with a larger volume when receiving the second message than when receiving the first message.

The second communication terminal outputs a reception notification sound for a longer time and/or with a larger

volume when receiving the third message than when receiving the second message.

When there is no response from the second communication terminal to the information server and the biometric information includes the information out of the normal range until the second standby time elapses after the transmission of the second message, the first communication terminal receives a notification of at least one of the biometric information on the user of the second communication terminal or the information on whether the biometric information includes the information out of the normal range.

When there is no response from the second communication terminal to the information server until a third standby time elapses after transmission of the third message, the first communication terminal receives a notification of information on presence or absence of the response from the second communication terminal to the information server for at least one of the first message, the second message, or the third message.

[0011]

Preferably, the information server records a position information database including position information on the second communication terminal.

The first communication terminal displays, based on the

position information database and the biometric information database, the position information on the second communication terminal and at least one of the biometric information on the user of the second communication terminal or the information on whether the biometric information includes the information out of the normal range.

[0012]

By displaying a first screen, it is possible to output the biometric information and the like together with the position information of the user of the communication terminal different from the communication terminal that displays the first screen.

[0013]

More preferably, the first communication terminal displays a first screen including the position information on the second communication terminal and information on whether the biometric information on the user of the second communication terminal includes the information out of the normal range.

[0014]

Whether the biometric information on the user of the communication terminal different from the communication terminal that displays the first screen is included in the normal range, that is, whether there is an abnormality in

said biometric information can be notified on the first screen.

[0015]

More preferably, the first communication terminal displays a second screen showing, in time series, the biometric information on the user of the second communication terminal.

[0016]

By displaying the second screen on the communication terminal, it is possible to confirm the biometric information on the user of the communication terminal different from the communication terminal displaying the second screen in time series.

Therefore, it is possible to visually recognize the time-series change in the biometric information on the user of the communication terminal different from the communication terminal displaying the second screen.

[0017]

More preferably, the first communication terminal displays a third screen including a calling instruction area for a phone number of the user of the second communication terminal, a calling instruction area for a phone number of a person related to the user of the second communication terminal, and a calling instruction area for a phone number of a predetermined institution.

[0018]

The user of the communication terminal can display the third screen while viewing the information (the first screen or the second screen) displayed on the communication terminal, for example, in a case where a state of the user of the communication terminal different from the communication terminal displaying the first screen or the second screen is concerned.

On the third screen, selection of call instructions to a plurality of contacts is displayed.

Therefore, this makes it possible to immediately make a call to these contacts.

[0019]

More preferably, the third screen includes, as the calling instruction area for the phone number of the predetermined institution, a calling instruction area for a phone number of at least one of a fire department or a police station specified based on the position information on the second communication terminal.

[0020]

By operating the calling instruction area of the phone number of the predetermined institution, it is possible to make a call to the fire department or the police station close to the position information of the user of the communication terminal different from the communication

terminal displaying the third screen.

[0021]

Preferably, the second screen includes an activity state display area indicating, in time series, information on whether the user of the second communication terminal is active and information on whether the user of the second communication terminal is moving.

When the second communication terminal is being operated or when acceleration of the second communication terminal is equal to or greater than an acceleration threshold value, it is determined that the user of the second communication terminal is active.

When a moving speed of the second communication terminal is equal to or higher than a speed threshold value, it is determined that the user of the second communication terminal is moving.

[0022]

Preferably, the second screen includes at least one of a body temperature display area indicating, in time series, a body temperature of the user of the second communication terminal and information on a normal range of the body temperature, a pulse display area indicating, in time series, a pulse of the user of the second communication terminal and information on a normal range of the pulse, or a blood pressure display area

indicating, in time series, a blood pressure of the user of the second communication terminal and information on a normal range of the blood pressure.

[0023]

Preferably, the information server varies, based on external information, the normal range of the biometric information.

[0024]

Accordingly, this makes it possible to accurately determine whether there is an abnormality in the biometric information according to a change in the external environment.

[0025]

Preferably, a detail level of the position information on the second communication terminal displayed on the first screen is determined based on the information on whether the biometric information on the user of the second communication terminal includes the information out of the normal range.

[0026]

When there is an abnormality or the like, the position information of the user of the communication terminal different from the communication terminal displaying the first screen can be displayed on the first screen.

[0027]

A biometric information program according to the present invention is a biometric information program executed by an information server configured to communicate with a first communication terminal and a second communication terminal.

The second communication terminal includes a biometric information acquisition unit configured to acquire biometric information on a user of the second communication terminal.

The information server records a biometric information database including the biometric information on the user of the second communication terminal and information on a normal range of the biometric information.

The biometric information program includes: a first message transmission step of transmitting a first message including predetermined information to the second communication terminal; a second message transmission step of transmitting a second message including the predetermined information to the second communication terminal when there is no response from the second communication terminal to the information server until a first standby time elapses after transmission of the first message; and a notification step of notifying the first communication terminal of information on presence or absence of the response from the second communication

terminal to the information server and/or at least one of the biometric information on the user of the second communication terminal or information on whether the biometric information includes information out of the normal range.

[0028]

Preferably, the biometric information program includes: a third message transmission step of transmitting a third message including the predetermined information to the second communication terminal when there is no response from the second communication terminal to the information server until a second standby time elapses after transmission of the second message; a first notification step of notifying, as one of the notification steps, the first communication terminal of at least one of the biometric information on the user of the second communication terminal or the information on whether the biometric information includes the information out of the normal range in a case where there is no response from the second communication terminal to the information server and the biometric information includes the information out of the normal range until the first standby time elapses after the transmission of the first message; a second notification step of notifying, as one of the notification steps, the first communication terminal of at least one of

the biometric information on the user of the second communication terminal or the information on whether the biometric information includes the information out of the normal range when there is no response from the second communication terminal to the information server and the biometric information includes the biometric information out of the normal range until the second standby time elapses after the transmission of the second message; and a third notification step of notifying, as one of the notification steps, the first communication terminal of information on presence or absence of the response from the second communication terminal to the information server for at least one of the first message, the second message, or the third message when there is no response from the second communication terminal to the information server until a third standby time elapses after transmission of the third message.

The second message includes information indicating that automatic retransmission is performed by any one of the first communication terminal and the information server and includes the predetermined information.

The third message includes information indicating that automatic re-retransmission is performed by any one of the first communication terminal and the information server and includes the predetermined information.

Advantageous Effects of Invention

[0029]

As described above, according to the present invention, it is possible to provide an information transmission system or the like that receives notification of biometric information or the like of another user.

Brief Description of Drawings

[0030]

Fig. 1 is a configuration diagram of an information transmission system according to a first embodiment.

Fig. 2 is a diagram illustrating a content example of a position information database.

Fig. 3 is a diagram illustrating a content example of a biometric information database.

Fig. 4 is a diagram illustrating a content example of a group information database.

Fig. 5 is a diagram illustrating a content example of an institution information database.

Fig. 6 is a diagram illustrating a content example of a contact information database.

Fig. 7 is a display example of a first screen of a first communication terminal, in which an upper area of a user position information display area is displayed.

Fig. 8 is a display example of the first screen of the first communication terminal, in which a lower area of the user position information display area is displayed.

Fig. 9 is a display example of a second screen of the first communication terminal.

Fig. 10 is a display example of a third screen of the first communication terminal.

Fig. 11 is a display example of a fourth screen of the first communication terminal in a case where there is a response from a second communication terminal.

Fig. 12 is a flowchart of screen switching operation control according to a second embodiment.

Fig. 13 is a display example of a fourth screen of a first communication terminal in a case where there is no response from a second communication terminal according to the second embodiment.

Fig. 14 is an example of a predetermined message transmitted from the first communication terminal according to the second embodiment to a neighbor’s terminal of the user of the second communication terminal.

Fig. 15 is a display example of a fifth screen of a second communication terminal according to a third embodiment.

Fig. 16 is a flowchart of notification control according to the third embodiment.

Fig. 17 is an example of a predetermined message transmitted from an information server according to the third embodiment to the first communication terminal.

Description of Embodiments

[0031]

Hereinafter, a first embodiment will be described with reference to the drawings. An information transmission system 1 according to the first embodiment includes an information source transmission unit 20, an information server 30 (a server communication unit 31, a server recording unit 33, a server control unit 35), and communication terminals (a 51st communication terminal M51 to a 55th communication terminal M55) (refer to Fig. 1).

In the first embodiment, a mode in which mutual position information, safety information, and biometric information are notified using five communication terminals will be described, but the number of communication terminals is not limited to five.

[0032]

(Configuration of Communication Terminal)

Each of the communication terminals (the 51st communication terminal M51 to 55th communication terminal M55) includes a communication unit 11, a display unit 12, a recording unit 13, a control unit 15, and a biometric

information acquisition unit 16. It is noted that the communication terminal is preferably a portable terminal such as a mobile phone, but may be a device fixed at a predetermined position.

[0033]

(Communication Unit 11)

The communication unit 11 communicates with the server communication unit 31 and communicates with a base station forming a wireless link with said communication terminal.

In particular, when a first calling instruction area 302a or the like is clicked on a third screen P3, a call to a predetermined phone number is made.

[0034]

(Display Unit 12, Recording Unit 13, and Control Unit 15)

The display unit 12 displays a first screen P1(refer to Figs. 7 and 8), a second screen P2 (refer to Fig. 9), the third screen P3 (refer to Fig. 10), and a fourth screen P4 (refer to Fig. 11).

A biometric information program (an information transmission program) according to the first embodiment is installed in the recording unit 13.

The control unit 15 executes the biometric information program and controls the respective units (the communication unit 11, the display unit 12, the recording

unit 13, and the biometric information acquisition unit 16) of the communication terminal.

[0035]

(Biometric Information Acquisition Unit 16)

The biometric information acquisition unit 16 acquires biometric information on a user of the communication terminal.

The biometric information includes at least one of information on a body temperature, a pulse, a blood pressure, or an activity state of the user of the communication terminal (information on whether the user of the communication terminal is active).

In the first embodiment, the biometric information acquisition unit 16 includes a measurement unit 16a that acquires information on the body temperature, the pulse, and the blood pressure of the user of the communication terminal, and a detection unit 16b that acquires information on the activity state of the user of the communication terminal.

The measurement unit 16a includes a body temperature sensor, a pulse sensor, and a blood pressure sensor.

[0036]

The detection unit 16b detects an operation state of the communication terminal.

Furthermore, the detection unit 16b includes a

positioning device such as a GPS and an acceleration sensor, and detects position information and acceleration of the communication terminal.

When the communication terminal is operated or the acceleration of the communication terminal is equal to or greater than an acceleration threshold value, the detection unit 16b determines that the user of the communication terminal is active.

When the communication terminal is not operated and the acceleration of the communication terminal is smaller than the acceleration threshold value, the detection unit 16b determines that the user of the communication terminal is not active.

Also, when a change in position information per unit time is large, that is, when a moving speed of the communication terminal is equal to or higher than a speed threshold value (for example, 30 km/h), it is determined that the user of the communication terminal is moving.

[0037]

The biometric information acquisition unit 16 may be built in the communication terminal, or may be of a wearable type attached to a user of the communication terminal, such as a wristwatch type.

For example, the measurement unit 16a may be configured as a wearable type, and the detection unit 16b may be built

in the communication terminal.

In this case, the measurement unit 16a communicates with the communication terminal by near field communication or the like.

Some functions of the detection unit 16b, such as detection of an operation state of the communication terminal, may be executed by the control unit 15 serving as the detection unit 16b.

Furthermore, the biometric information acquisition unit 16 may specify a user or may calculate biometric information (body temperature or the like) of the user from image information obtained by an imaging device.

[0038]

It is desirable that the biometric information acquisition unit 16 constantly acquires the biometric information.

However, the acquisition of information on the body temperature, the blood pressure, and the like may be performed every certain period (for example, a first time T1 to be described later).

The biometric information obtained by the biometric information acquisition unit 16 is transmitted to the information server 30 via the communication unit 11.

[0039]

(Biometric Information Program)

The first embodiment shows an example in which a user (a user name: papa, Taro) with a user ID: 11 logs into the biometric information program (information transmission program) installed in the 51st communication terminal M51 with the user ID: 11, a user (a user name: Hanako) with a user ID: 12 logs into the biometric information program installed in the 52nd communication terminal M52 with the user ID: 12, a user (a user name: Susumu) with a user ID: 13 logs into the biometric information program installed in the 53rd communication terminal M53 with the user ID: 13, and a user (a user name: grandpa) with a user ID: 23 logs into the biometric information program installed in the 54th communication terminal M54 with the user ID: 23, and a user (a user name: grandma) with a user ID: 24 logs into the biometric information program installed in the 55th communication terminal M55 with the user ID: 24.

Further, screen display examples illustrated in Figs. 7 to 11 are displayed after the user (the user name: papa, Taro) with the user ID: 11 logs into the biometric information program installed in the 51st communication terminal M51 with the user ID: 11.

[0040]

Additionally, a description will be given on the assumption that a “first communication terminal” or a “communication terminal” described in the claims

corresponds to the 51st communication terminal M51, but the present invention is not limited to the 51st communication terminal M51.

In addition, a description will be given on the assumption that a “second communication terminal” described in the claims corresponds to the 54th communication terminal M54, but the present invention is not limited to the 54th communication terminal M54.

[0041]

Information transmission and reception between the information server 30 and the communication terminal is performed via the biometric information program.

In the first embodiment, a description will be given as to a mode using the biometric information program installed in each communication terminal. However, as shown in the third embodiment, each communication terminal may access an application service provider (ASP) server via a network and may use a biometric information program stored in said ASP server.

[0042]

(Information Source Transmission Unit 20)

The information source transmission unit 20 outputs disaster information (danger information) to the server communication unit 31 of the information server 30.

The disaster information includes at least information

on a disaster site, and in the first embodiment, the disaster information includes information on a disaster type, a location of the disaster, and a date and time of the disaster.

In the first embodiment, the disaster information will be described as disaster information related to an earthquake, but may be another disaster information such as a flood. In addition, the information may be not only information that has occurred in the past, such as an earthquake occurrence report, but also information that is predicted to occur in the future, such as lightning caution or earthquake prediction.

The danger information output from the information source transmission unit 20 to the server communication unit 31 of the information server 30 is not limited to the disaster information, and may be other danger information. For example, suspicious person information, accident information, case information such as a killing case, and the like can be considered as said danger information. Said danger information includes information related to a place corresponding to the suspicious person information or the like.

[0043]

The information source transmission unit 20 is installed in a place in which disaster information can be

transmitted, such as the Meteorological Agency, in a state where network connection with the information server 30 is possible.

However, the information source transmission unit 20 may not be installed, and a user who has received the relevant information of the disaster information may input the disaster information to the information server 30 via an input/output terminal 70, and the information server 30 may transmit the disaster information to the communication terminal based on this.

[0044]

The first embodiment shows an example in which the information server 30 receives disaster information having "type of disaster: earthquake (magnitude 7.1 with maximum predicted seismic intensity of 6- in Shikoku area), location: Shikoku area, date and time: August 3, 2016, 8:30" from the information source transmission unit 20, and the 51st communication terminal M51 to the 55th communication terminal 55 transmit their own position information and the like to the information server 30 under the following conditions.

[0045]

The 51st communication terminal M51 transmitted position information and safety answer information acquired at 8:50 on August 3, 2016 to the information server 30.

The 52nd communication terminal M52 transmitted position information and safety answer information acquired at 8:46 on August 3, 2016 to the information server 30.

The 53rd communication terminal M53 transmitted position information and safety answer information acquired at 8:45 on August 3, 2016 to the information server 30.

The 54th communication terminal M54 transmitted position information acquired at 8:12 on August 3, 2016 to the information server 30, but has not transmitted safety answer information to the information server 30.

The 55th communication terminal M55 transmitted position information acquired at 8:27 on August 3, 2016 to the information server 30, but has not transmitted safety answer information to the information server 30.

[0046]

(Information Server 30)

Next, the respective units (the server communication unit 31, the server recording unit 33, and the server control unit 35) of the information server 30 will be described.

[0047]

(Server Communication Unit 31 of Information Server 30)

The server communication unit 31 of the information server 30 communicates with each of the communication terminals (the 51st communication terminal M51 to the 55th

communication terminal M55) registered in a position information database D1, and acquires position information on each communication terminal and biometric information on a user of each communication terminal every first time T1(for example, 30 minutes) also before transmitting the disaster information to these communication terminals.

[0048]

For example, it is conceivable that each communication terminal transmits the position information and the biometric information on the user of each communication terminal to the server communication unit 31 of the information server 30 every first time T1 using the biometric information program installed in each communication terminal.

[0049]

In addition, instead of a mode in which the position information is acquired from each communication terminal, a consideration is given as to a mode in which the server communication unit 31 of the information server 30 communicates with any one of a base station that forms a wireless link with a communication terminal in a communication carrier, a mobile switching center (MSC) that performs routing (selection of a communication route), call setting/disconnection, billing, and the like of the communication terminal, a visitor location register (VLR)

which is a position registration database for each area covered by a mobile switching unit, a gateway mobile switching center (GMSC), and a home location register (HLR) which is a database that manages user information such as a mobile phone number, identification information (identification number of a terminal, such as IMEI, or identification number of an SIM card, such as ICCID) of said communication terminal, and position information so as to acquire the position information of each communication terminal.

[0050]

When the position information of each communication terminal is acquired, a detail level of the position information is not limited, and the position information at the most detailed level that can be acquired is acquired and recorded in the position information database D1.

However, when the position information of said communication terminal or another communication terminal (second communication terminal) is disclosed to the communication terminal (first communication terminal), the detail level of the position information is adjusted based on the "the detail level of the disclosed position information (a first detail level parameter dp1, a second detail level parameter dp2)" set by the user of the communication terminal.

[0051]

Further, the server communication unit 31 of the information server 30 receives disaster information from the information source transmission unit 20, transmits said disaster information and the like to the communication terminals (the 51st communication terminal M51 to the 55th communication terminal M55) based on the position information database D1 and a group information database D3 after receiving said disaster information (alternatively, after the input of the disaster information by the input/output terminal 70), and receives the safety answer information from said communication terminal.

[0052]

(Server Recording Unit 33 of Information Server 30)

The server recording unit 33 of the information server 30 records the position information database D1, a biometric information database D2, the group information database D3, an institution information database D4, and a contact information database D5.

In addition, a program for communicating with the communication terminal and transmitting and receiving the disaster information, the biometric information, and the like is installed in the server recording unit 33 in correspondence with the biometric information program (the information transmission program) installed in the

communication terminal.

[0053]

(Position Information Database D1)

The position information database D1 shows a relationship among information on a user of a communication terminal, a communication terminal (a communication terminal name), information on the position of said communication terminal, and information on safety transmitted from said communication terminal (refer to Fig. 2).

The information on the user of the communication terminal in the position information database D1 is information (information set by a user setting operation) input by the user via each communication terminal, and includes a user name, a user ID (an identification number for logging into the biometric information program), and a user mark (which may be a photograph) corresponding to each communication terminal.

The user name may be a form in which different names are used for each group, such as user names: papa and Taro corresponding to the user ID: 11.

[0054]

The information on the position of the communication terminal is information received from an HLR or the like or the communication terminal, and includes latitude and

longitude information corresponding to each of the communication terminals, an area name corresponding to said latitude and longitude information, and a positioning date and time.

[0055]

The latitude and longitude information and the positioning date and time in the position information database D1 are acquired every first time T1 by the server communication unit 31 of the information server 30 communicating with the communication terminals (the 51st communication terminal M51 to the 55th communication terminal M55) registered in the position information database D1 or by the server communication unit 31 communicating with a base station or the like in a communication carrier.

[0056]

The area name corresponding to the latitude and longitude information in the position information database D1 is obtained by converting the latitude and longitude information of the communication terminal into the area name using a table (not illustrated) for converting the latitude and longitude information into the area name.

[0057]

The information on safety in the position information database D1 indicates whether the safety answer operation

has been performed from the communication terminals (the 51st communication terminal M51 to the 55th communication terminal M55) registered in the position information database D1 by the server communication unit 31 of the information server 30, and is initialized when the disaster information is transmitted, and a parameter (a safety type parameter sp) in a safety type field is set to an initial value (sp = 1) indicating that the safety of the users of all the communication terminals is unknown (the safety answer operation has not been performed).

[0058]

After the initialization, the safety information in the position information database D1 is updated when the safety answer information is received from said communication terminal.

[0059]

When a specific operation (a safety answer operation) for the safety answer on the biometric information program installed in the communication terminal is performed by the user of said communication terminal, a value of the parameter in the safety type field is changed to 0 (safety type parameter sp = 0 indicating that an answer has been given). That is, in a state in which a specific operation (a safety answer operation) for said safety answer is not performed, the initial value: 1 is maintained.

[0060]

(Biometric Information Database D2)

The biometric information database D2 shows a relationship among information on a user of a communication terminal, a threshold value (information on a normal range) for abnormality determination of biometric information on the user of the communication terminal, the biometric information on the user of said communication terminal, and information on presence or absence of the abnormality of the user of said communication terminal (refer to Fig. 3).

The information on the user of the communication terminal in the biometric information database D2 is information (information set by the user setting operation) input by the user via each communication terminal, and includes a user name and a user ID corresponding to each communication terminal.

[0061]

Information on a normal range in the biometric information database D2 is information input by the user via each communication terminal (information set by the user setting operation), and includes the normal range of the body temperature, the normal range of the pulse, and the normal range of the blood pressure (the normal range of maximum blood pressure and the normal range of minimum blood pressure) of the user corresponding to each

communication terminal.

The information on the normal range may be set individually by each user, or may be set to a fixed value that does not vary depending on the user.

[0062]

In addition, the information on the normal range may be set individually, may be set to the fixed value, or may be further adjusted in value by external information (for example, position information of the communication terminal, weather information, and the like).

For example, it is conceivable that the information server 30 communicates with an external information device 90 to acquire weather information, and in a case where said weather information includes a prediction that the temperature of an area including the position of the communication terminal of the user will be high, the upper limit of the normal range of the body temperature is adjusted to be high to update the biometric information database D2.

That is, the information server 30 varies the normal range (the normal ranges of body temperature, pulse, and blood pressure) of the biometric information based on the external information.

Accordingly, this makes it possible to accurately determine whether there is an abnormality in the biometric

information according to a change in the external environment.

[0063]

The biometric information in the biometric information database D2 is information obtained by the biometric information acquisition unit 16 of each communication terminal, and includes information on the body temperature, information on the pulse, information on the blood pressure, and information on the activity state (active or not active).

[0064]

The biometric information in the biometric information database D2 is acquired by allowing the server communication unit 31 of the information server 30 to communicate with the communication terminals (the 51st communication terminal M51 to the 55th communication terminal M55) registered in the biometric information database D2 every first time T1.

[0065]

The information on the presence or absence of the abnormality of the user of said communication terminal in the biometric information database D2 indicates whether the biometric information on the user of said communication terminal includes information out of the normal range.

When all the pieces of biometric information (the body

temperature, the pulse, and the blood pressure) are within the normal range, the parameter of the presence or absence of the abnormality of the user (biometric information parameter rp) is set to the initial value (rp = 0) indicating that the mode is not the abnormal mode.

When at least one (any one of the body temperature, the pulse, and the blood pressure) of the biometric information is not within the normal range, the biometric information parameter rp is set to a value (rp = 1) indicating that the mode is the abnormal mode.

The determination as to whether the mode is the abnormal mode may be performed using only the latest information of the biometric information, or may be performed using information for the past two hours T2 (for example, T2 = 2 hours) from the latest information of the biometric information.

[0066]

Fig. 3 illustrates an example of biometric information measured at 8:00 on August 3, 2016 and information on the normal range of the user (the user name: grandpa) with the user ID: 23, and biometric information measured at 8:00 on August 3, 2016 and information on the normal range of the user (the user name: grandma) with the user ID: 24.

Since a measured value (132 mmHg) of the maximum blood pressure exceeds the normal range (equal to or less than

130 mmHg) of the maximum blood pressure among the pieces of biometric information measured at 8:00 on August 3, 2016 of the user (the user name: grandpa) with the user ID: 23, the biometric information parameter rp is set to the value (rp = 1) indicating that the mode is the abnormal mode.

Since all the pieces of biometric information measured at 8:00 on August 3, 2016 of the user (the user name: grandma) with the user ID: 24 are within the normal range, the biometric information parameter rp is set to a value (rp=0) indicating that the mode is not the abnormal mode.

[0067]

(Group Information Database D3)

The group information database D3 indicates a relationship between information on a group used in a group chat (a group message) in the biometric information program and information on a user belonging to said group (refer to Fig. 4).

The information on the group is information (information set by group setting operation) input by the user via the communication terminal, and includes a group name, a group ID (a group identification number), and a group mark (may be a photograph).

The information on the user belonging to the group is information (information set by position information disclosure designation operation) input by the user via the

communication terminal, and includes a user name belonging to the group, a user ID belonging to the group, a detail level (a first detail level parameter dp1) of the position information disclosed in normal times (while the safety type parameter sp is 0 and the biometric information parameter rp is 0), and a detail level (a second detail level parameter dp2) of the position information disclosed in disaster (while the safety type parameter sp is 1) or abnormal mode (while the biometric information parameter rp is 1).

[0068]

In the first embodiment, a mode in which the first detail level parameter dp1 and the second detail level parameter dp2 have three stages (1: discloses coarse position information (for example, a prefecture level); 2: discloses medium roughness position information (for example, a municipal level); and 3: discloses fine position information (for example, the address level)) will be described, but a mode in which the first detail level parameter dp1 and the second detail level parameter dp2 have two stages or four or more stages may be described.

[0069]

It is noted that the second detail level parameter dp2 is desirably set to a detail level equal to or finer than the first detail level parameter dp1.

For example, it is conceivable that the first detail level parameter dp1 can be adjusted by the user in the three stages, and the second detail level parameter dp2 is fixed at the finest detail level.

[0070]

In the first embodiment, the user (the user name: papa, the first detail level parameter dp1: 2, and the second detail level parameter dp2: 3) with the user ID of 11, the user (the user name: Hanako, the first detail level parameter dp1: 1, and the second detail level parameter dp2: 3) with the user ID of 12, and the user (the user name: Susumu, the first detail level parameter dp1: 2, and the second detail level parameter dp2: 3) with the user ID of 13 belong to a group name: Tanaka family (a group ID: G001).

In addition, the user (the user name: grandpa, the first detail level parameter dp1: 3, and the second detail level parameter dp2: 3) with the user ID: 23, the user (the user name: grandma, the first detail level parameter dp1: 3, and the second detail level parameter dp2: 3) with the user ID: 24, and the user (the user name: Taro, the first detail level parameter dp1: 1, and the second detail level parameter dp2: 3) with the user ID: 11 belong to a group name: parents' home (a group ID: G002).

[0071]

(Institution Information Database D4)

The institution information database D4 indicates a relationship between an institution name (names and phone numbers of police station, fire department, and the like) and information on a jurisdiction for each area (refer to Fig. 5).

The information on the jurisdiction may be detailed information that exactly matches an area defined by an administrative agency, but a circular area centered on a substantially central position of said area and including substantially the entire area of said area may be set as the jurisdiction.

The institution information database D4 is used when a communication terminal makes a call to a phone number of a police station or a fire department close to the position of a communication terminal of a user corresponding to the biometric information.

[0072]

(Contact Information Database D5)

The contact information database D5 indicates a relationship between information on a user of a communication terminal, a phone number of the user of the communication terminal, a phone number and a name of a first related person (a neighbor) of said user, and a phone number and a name of a second related person (a care

manager) of said user (refer to Fig. 6).

The contact information database D5 is used when the communication terminal makes a call to the phone number of the user corresponding to the biometric information or the related person (the neighbor or the care manager).

The contact information database D5 may include an e-mail address of the first related person (the neighbor) or the like of said user.

[0073]

(Server Control Unit 35 of Information Server 30)

The server control unit 35 of the information server 30 executes a program installed in the server recording unit 33, and controls the server communication unit 31 and the server recording unit 33.

[0074]

Specifically, when the information server 30 receives disaster information from the information source transmission unit 20, the server control unit 35 transmits said disaster information to the communication terminals (the 51st communication terminal M51 to the 55th communication terminal M55) registered in the position information database D1 via the server communication unit 31.

[0075]

Also, the server control unit 35 updates the position

information database D1, the biometric information database D2, the group information database D3, and the contact information database D5 recorded in the server recording unit 33 when the information server 30 receives the information on the user, the information on the group to which the user belongs, and the information on the detail level of the disclosed position information from the 51st communication terminal M51 to the 55th communication terminal M55 by the user setting operation, the group setting operation, the position information disclosure designation operation, or the like.

[0076]

In addition, when the information server 30 receives the position information of the 51st communication terminal M51 to the 55th communication terminal M55, the server control unit 35 updates the position information in the position information database D1 recorded in the server recording unit 33.

[0077]

Further, when the information server 30 receives the safety answer information from the 51st communication terminal M51 to the 55th communication terminal M55 based on the safety answer operation by the user of the communication terminal, the server control unit 35 updates the safety type parameter sp in the position information

database D1 recorded in the server recording unit 33.

When the 51st communication terminal M51 to the 55th communication terminal M55 transmit the safety answer information to the information server 30 based on the safety answer operation, position information is also transmitted after positioning is completed.

The position information in the position information database D1 is updated based on the transmitted position information.

It is noted that, when the safety answer information is transmitted based on the safety answer operation, the position information may not be transmitted.

[0078]

Also, the server control unit 35 updates the biometric information database D2 recorded in the server recording unit 33 when the information server 30 receives the information on the normal range from the 51st communication terminal M51 to the 55th communication terminal M55 based on a threshold setting operation by the user of the communication terminal.

Further, when the information server 30 receives the biometric information from the 51st communication terminal M51 to the 55th communication terminal M55, the server control unit 35 updates the biometric information database D2 recorded in the server recording unit 33.

[0079]

In addition, the server control unit 35 updates the contact information database D5 recorded in the server recording unit 33 when the information server 30 receives the phone number of the user and the information on the phone number or name of the related person (the neighbor or the care manager) from the 51st communication terminal M51 to the 55th communication terminal M55 based on a phone number setting operation by the user of the communication terminal.

[0080]

Further, based on the position information database D1, the biometric information database D2, and the group information database D3, the server control unit 35 transmits, via the server communication unit 31, the position information, the safety information, and the biometric information of another user (another person) belonging to the group to which the user (the person himself or herself) logging in said biometric information program belongs to the communication terminal of the user (the person himself or herself) logging in said biometric information program.

For example, since the user (the user name: papa, Taro) with the user ID: 11 belongs to the group with the group name: Tanaka family (the group ID: G001) and the group with

the group name: parents’ home (the group ID: G002), the position information, the safety information, and the biometric information on the users belonging to these groups (the user with the user ID: 12 and the user with the user ID: 13 who belong to the group with the group name: Tanaka family (the group ID: G001), and the user with the user ID: 23 and the user with the user ID: 24 who belong to the group name: parent's family (the group ID: G002)) are transmitted to the 51st communication terminal M51 corresponding to the user ID: 11.

[0081]

As the position information transmitted from the information server 30 to the communication terminal, the position information having the finest detail level is used, and the detail level of the position information displayed on the display unit 12 of the communication terminal is adjusted based on the safety information (the safety type parameter sp) and the biometric information (the biometric information parameter rp).

Specifically, for a user having the safety type parameter sp of 0 and the biometric information parameter rp of 0, the position information is displayed at the detail level (the first detail level parameter dp1) of the position information disclosed in normal times, and for a user having the safety type parameter sp of 1 or the

biometric information parameter rp of 1, the position information is displayed at the detail level (the second detail level parameter dp2) of the position information disclosed at the time of disaster.

However, at the stage of transmitting the position information from the information server 30 to each communication terminal, the position information may be transmitted to each communication terminal in a state in which the detail level is changed for each communication terminal to be transmitted and for each user who discloses the position information on the basis of the safety information (the safety type parameter sp) and the biometric information (the biometric information parameter rp) recorded in the position information database D1.

[0082]

(Biometric Information Program)

Next, the biometric information program will be described in detail.

The biometric information program executes a reception step of receiving the position information and the biometric information of another communication terminal from the information server 30, a first display step of displaying the first screen P1(display of the disaster information and the position information for each user) on the display unit 12 of the communication terminal having

the biometric information program installed therein, a second display step of displaying the second screen P2 (display of a biometric information list) on the display unit 12 of the communication terminal having the biometric information program installed therein, a third display step of displaying the third screen P3 (display of a phone contact list) on the display unit 12 of the communication terminal having the biometric information program installed therein, a calling step of making a call to a contact designated on the third screen P3, and a fourth display step of displaying the fourth screen P4 (display of a message) on the display unit 12 of the communication terminal having the biometric information program installed therein.

[0083]

Any one of the first screen P1 to the fourth screen P4 is displayed on the display unit 12 of the communication terminal by operation of the user.

[0084]

(First Screen P1)

The first screen P1 includes a disaster information display area 101, a user position information display area 103, and a screen switching button display area 105 (refer to Figs. 7 and 8).

[0085]

In the disaster information display area 101, information (area, date and time, maximum seismic intensity, magnitude) about the earthquake that occurred immediately before is displayed, and a map centering on the area included in the information about said earthquake is displayed in the background.

In the disaster information display area 101, a disaster level mark ma1 indicating the scale of the disaster (a numerical value of the maximum predicted seismic intensity) is provided for the first disaster information and the second disaster information.

In the first embodiment, the disaster level mark ma1 is displayed by an outline character.

[0086]

In the first embodiment, the disaster level mark ma1 is surrounded by a frame having a substantially rectangular shape. However, said frame may be omitted, and only the numerical value of the disaster scale may be displayed in the disaster information display area 101.

[0087]

When no earthquake has occurred within a certain period of time in the past, “the fact that no earthquake has occurred” and detailed position information of said communication terminal are displayed in the disaster information display area 101.

It is noted that, in the disaster information display area 101, only “the fact that no earthquake has occurred” may be displayed, and display including detailed position information of said communication terminal may not be performed.

[0088]

In the user position information display area 103, for each group to which the user of said communication terminal belongs, a user mark, a user name, position information, and an acquisition date and time of the position information which are related to the belonging user, a group mark, and a group name are provided.

Figs. 7 and 8 illustrate examples in which, for each of the two groups (the first group name: Tanaka family, the group ID: G001, the second group name: parents’ home, and the group ID: G002) to which the user with the user ID: 11 belongs, position information or the like of the user belonging to said group is displayed.

[0089]

Also, when only the user of said communication terminal is set to the group and the user of another communication terminal is not set, only pieces of information on the user of said communication terminal (a user mark, a user name, a piece of position information, and an acquisition date and time of the position information) are displayed. In this

case, pieces of information on the group (a group mark, a group name, and the like) may be omitted.

[0090]

When an amount of information displayed in the user position information display area 103 is large, the user position information is displayed in a state of being scrollable in the vertical direction. Fig. 7 illustrates a state in which the upper area in the user position information display area 103 is displayed, and Fig. 8 illustrates a state in which the lower area in the user position information display area 103 is displayed.

[0091]

The detail level of the position information displayed in the user position information display area 103 is determined based on the safety information (the safety type parameter sp) in the position information database D1, the biometric information (the biometric information parameter rp) in the biometric information database D2, and the detail level (the first detail level parameter dp1 and the second detail level parameter dp2) of the position information to be disclosed in the group information database D3.

For a user whose safety type parameter sp is 0 and whose biometric information parameter rp is 0, that is, a user who has performed the safety answer operation and

whose biometric information has no abnormality, the position information of said user is displayed with the detail level of the position information disclosed in normal times based on the first detail level parameter dp1.

Figs. 7 and 8 illustrate examples in which the safety type parameter sp of the user name: Hanako belonging to the group name: Tanaka family is 0, the biometric information parameter rp thereof is 0, and the position information thereof is displayed with the detail level (the first detail level parameter dp1: 1 (the coarse position information level)) of the position information disclosed in normal times.

[0092]

Even if the user ID is the same, the detail level of the position information disclosed in each group can be made different.

Figs. 7 and 8 illustrate examples in which the user having the user ID: 11 displays medium position information (Minato-ku, Tokyo) in normal times with the user name: papa in the group name: Tanaka family based on the first detail level parameter dp1, and displays coarse position information (Tokyo) in normal times with the user name: Taro in the group name: parents' home based on the first detail level parameter dp1.

[0093]

For a user whose safety type parameter sp1 is 1 or whose biometric information parameter rp is 1, that is, a user who has not performed the safety answer operation or whose biometric information has an abnormality detected, the position information of said user is displayed with the detail level of the position information disclosed at the time of disaster based on the second detail level parameter dp2.

Figs. 7 and 8 illustrate examples in which the safety type parameter sp of the user name: grandpa belonging to the group name: the parents' home is 1, the biometric information parameter rp thereof is 1, and the position information thereof is displayed with the detail level of the position information disclosed at the time of disaster (the second detail level parameter dp2: 3 (fine position information level)).

Additionally, Fig. 8 illustrates an example in which the safety type parameter sp of the user name: grandma belonging to the group name: the parents' home is 1, the biometric information parameter rp thereof is 0, and the position information thereof is displayed with the detail level of the position information disclosed at the time of disaster (the second detail level parameter dp2: 3 (fine position information level)).

[0094]

Further, in the vicinity of any one of the user mark, the user name, and the position information, a safety unconfirmed mark ma2 is provided which is turned on when any one of the safety type parameter sp is 1 (the safety answer is not given) and the safety type parameter sp is 0 (the safety answer is given) and is turned off when the other case is given.

In the first embodiment, as said safety unconfirmed mark ma2, a mark (a mark with an exclamation mark disposed inside a rhombus) that is turned on when the safety type parameter is 1 (the safety answer is not given) and is turned off when the safety type parameter is 0 (the safety answer is given) is provided on the upper right side of the user mark.

However, the shape of the safety unconfirmed mark ma2 is not limited thereto, and may be another shape such as a circular frame surrounding the periphery of the user mark.

[0095]

In addition, in the vicinity of any one of the user mark, the user name, and the position information, there is provided a biometric abnormality mark ma3 that is turned on when any one of the biometric information parameter rp is 1 (abnormality of the biometric information is detected) and the biometric information parameter rp is 0 (an abnormality of the biometric information is not detected) and is turned

off when the other case is given.

That is, the communication terminal displays the first screen P1 including the information (the biometric abnormality mark ma3) on whether the biometric information on the user of another communication terminal includes the biometric information out of the normal range.

In the first embodiment, a mark (a character is “abnormal” and a rectangular frame is provided around said character) that is turned on when the biometric information parameter rp is 1 and is turned off when the biometric information parameter rp is 0 is provided as said biometric abnormality mark ma3 diagonally above the right side of the position information.

When the biometric abnormality mark ma3 is clicked, the display is switched to the display of the second screen P2. Details of the second screen P2 will be described later.

[0096]

However, the communication terminal may include some or all of the biometric information on the user of another communication terminal in the first screen P1 instead of including the information on whether the biometric information on the user of another communication terminal includes information out of the normal range in the first screen P1.

[0097]

In addition, when the biometric abnormality mark ma3 is clicked, the display may be switched to the display of the third screen P3 to be described later instead of the display of the second screen P2.

[0098]

It is noted that the switching of the display from the first screen P1 to the second screen P2 is not limited to the clicking of the biometric abnormality mark ma3.

For example, it is conceivable to switch to the display of the second screen P2 including the biometric information corresponding to the user name by clicking an area in which said user name is written in the user position information display area 103.

In this case, it is possible to cause the display unit 12 of the communication terminal to display details (the second screen P2) of the biometric information on the user determined that there is no abnormality in the biometric information.

[0099]

By clicking the area in which the user mark is displayed in the user position information display area 103, the display is switched to the display of the fourth screen P4 including a message with the user ID corresponding to said user name (refer to Fig. 11). However, the display switching to the fourth screen P4 may be performed by

another operation.

[0100]

When the vicinity of the position information for each user displayed in the user position information display area 103 is clicked, the display is switched to map display (not illustrated) of the position information of said user.

[0101]

The screen switching button display area 105 includes a home button 105a for switching to display of the first screen P1, a chat button 105b for switching to a chat screen (not illustrated) of a group to which the user belongs, a disaster information button 105c for switching to a time-series list display (not illustrated) of disaster information, a shelter button 105d for switching to a list display (not illustrated) of shelters near the location of said communication terminal, and a setting button 105e for switching to an operation screen display (not illustrated) for editing the contents of the biometric information database D2.

[0102]

By displaying the first screen P1, it is possible to output the biometric information and the like together with the position information of the user of the communication terminal different from the communication terminal that displays the first screen P1.

[0103]

In particular, it is possible to notify, on the first screen P1, whether the biometric information on the user of the communication terminal different from the communication terminal that displays the first screen P1 includes information out of the normal range, that is, whether there is an abnormality in said biometric information.

[0104]

Further, the detail level of the position information displayed on the first screen P1 together with the biometric information or the like is determined according to the presence or absence of the abnormality in the biometric information.

Therefore, from the viewpoint of protecting privacy when there is no abnormality or the like, the position information is not displayed in detail, but when there is an abnormality or the like, the position information of the user of the communication terminal different from the communication terminal displaying the first screen P1 can be displayed on the first screen P1.

[0105]

(Second Screen P2)

The second screen P2 includes a first name display area 201 for displaying the name of the user corresponding to the biometric information and a biometric information

display area 202 for displaying the biometric information (refer to Fig. 9). It is noted that the screen switching button display area 105 may also be provided on the second screen P2.

The biometric information display area 202 includes a body temperature display area 202a, a pulse display area 202b, a blood pressure display area 202c, and an activity state display area 202d.

[0106]

The pieces of information on the body temperature, the pulse, and the blood pressure in the biometric information display area 202 display the biometric information (the normal range and measured value) of the user in time series for each measurement type.

In Fig. 9, the normal range is indicated by a broken line, and the measured value is indicated by a solid line.

The measured value is desirably displayed in different output methods in a case where the measured value is within the normal range and in a case where the measured value is out of the normal range.

For example, a solid line of the measured value within the normal range may be displayed in black, and a solid line of the measured value out of the normal range may be displayed in red.

Fig. 9 shows an example in which a solid line of the

measured value within the normal range is indicated by a thin line, and a solid line of the measured value out of the normal range is indicated by a thick line.

[0107]

The body temperature display area 202a displays information on the body temperature of the user in time series.

The pulse display area 202b displays information on the pulse of the user in time series.

The blood pressure display area 202c displays information on the blood pressure of the user in time series.

[0108]

The information on the activity state in the biometric information display area 202 displays, in time series, an active time zone, a non-active time zone, and a moving time zone in the biometric information display area 202.

In Fig. 9, the active time zone is indicated by a white zone, the non-active time zone is indicated by a black zone, and the moving time zone is indicated by a zone including hatched lines.

[0109]

By displaying the second screen P2 on the display unit 12 of the communication terminal, it is possible to confirm the biometric information on the user of the communication

terminal different from the communication terminal displaying the second screen P2 in time series.

Therefore, it is possible to visually recognize the time-series change in the biometric information on the user of the communication terminal different from the communication terminal displaying the second screen P2.

[0110]

When a specific operation (for example, an operation of sliding in the right direction, or the like) for switching to the third screen P3 is performed in a state in which the second screen P2 is displayed, the display is switched to the display of the third screen P3.

When a specific operation (for example, an operation of sliding in the left direction, or the like) for switching to the first screen P1 is performed in a state in which the second screen P2 is displayed, the display is switched to the display of the first screen P1.

When the screen switching button display area 105 is provided on the second screen P2, the display is switched to the display of the first screen P1 by clicking the home button 105a.

[0111]

(Third Screen P3)

The third screen P3 includes a second name display area 301 that displays a contact list of the user corresponding

to the biometric information and a contact name display area 302 that displays the name of the contact (refer to Fig. 10). It is noted that the screen switching button display area 105 may also be provided on the third screen P3.

[0112]

The contact name display area 302 includes the first calling instruction area 302a, a second calling instruction area 302b, a third calling instruction area 302c, a fourth calling instruction area 302d, a fifth calling instruction area 302e, a sixth calling instruction area 302f, and a seventh calling instruction area 302g.

[0113]

In the first calling instruction area 302a, a notation indicating that a call is to be made to the user corresponding to the biometric information is written, and when the first calling instruction area 302a is clicked, a call is made to a phone number of the user corresponding to the biometric information recorded in the contact information database D5.

In the first embodiment, when the first calling instruction area 302a is clicked, the 51st communication terminal M51 of the user (the user name: papa, Taro) with the user ID: 11 makes a call to a phone number (090-△△△△-o●o●) of the 54th communication terminal M54 of the

user (the user name: grandpa) with the user ID: 23 corresponding to the biometric information.

[0114]

In the second calling instruction area 302b, a notation indicating that a call is to be made to a neighbor (a first related person) of the user corresponding to the biometric information is written, and when the second calling instruction area 302b is clicked, a call is made to a phone number of a neighbor of the user corresponding to the biometric information recorded in the contact information database D5.

In the first embodiment, when the second calling instruction area 302b is clicked, the 51st communication terminal M51 of the user (the user name: papa, Taro) with the user ID: 11 makes a call to a phone number (080-△△●●-××○○) of a neighbor (Mx. Suzuki) of the user (the user name: grandpa) with the user ID: 23 corresponding to the biometric information.

[0115]

In the third calling instruction area 302c, a notation indicating that a call is made to a care manager (a second related person) of the user corresponding to the biometric information is written, and when the third calling instruction area 302c is clicked, a call is made to a phone number of the care manager of the user corresponding to the

biometric information recorded in the contact information database D5.

In the first embodiment, when the third calling instruction area 302c is clicked, the 51st communication terminal M51 of the user (the user name: papa, Taro) with the user ID: 11 makes a call to a phone number (090-□□■■-●●△△) of a care manager (Mx. Kato) of the user (the user name: grandpa) with the user ID: 23 corresponding to the biometric information.

[0116]

In the fourth calling instruction area 302d, a notation indicating that a call is to be made to an emergency consultation center is written, and when the fourth calling instruction area 302d is clicked, a call is made to a phone number (#7119) of the emergency consultation center.

In the first embodiment, when the fourth calling instruction area 302d is clicked, the 51st communication terminal M51 of the user (the user name: papa, Taro) with the user ID: 11 makes a call to the phone number (#7119) of the emergency consultation center.

[0117]

In the fifth calling instruction area 302e, a notation indicating that a call is to be made to a police consultation dedicated phone is written, and when the fifth calling instruction area 302e is clicked, a call is made to

a phone number (#9110) of the police consultation dedicated phone.

In the first embodiment, when the fifth calling instruction area 302e is clicked, the 51st communication terminal M51 of the user (the user name: papa, Taro) with the user ID: 11 makes a call to the phone number (#9110) of the police consultation dedicated phone.

[0118]

In the sixth calling instruction area 302f, a notation indicating that a call is to be made to a fire department close to the communication terminal of the user corresponding to the biometric information is written, and when the sixth calling instruction area 302f is clicked, a call is made to a phone number of the fire department having jurisdiction over the position of the communication terminal of the user corresponding to the biometric information based on the position information database D1 and the institution information database D4.

In the first embodiment, when the sixth calling instruction area 302f is clicked, the 51st communication terminal M51 of the user (the user name: papa, Taro) with the user ID: 11 makes a call to a phone number (054-o△o△-o△o△) of the fire department (Shimizu Fire Department) that has jurisdiction over the position (3 Ninomaru-cho, Shimizu-ku, Shizuoka City) of the communication terminal of

the user (the user name: grandpa) with the user ID: 23 corresponding to the biometric information.

[0119]

In the seventh calling instruction area 302g, a notation indicating that a call is to be made to a police station close to the communication terminal of the user corresponding to the biometric information is written, and when the seventh calling instruction area 302g is clicked, a call is made to a phone number of a police station that has jurisdiction over the position of the communication terminal of the user corresponding to the biometric information based on the position information database D1 and the institution information database D4.

In the first embodiment, when the seventh calling instruction area 302g is clicked, the 51st communication terminal M51 of the user (the user name: papa, Taro) with the user ID: 11 makes a call to a phone number (054-□o□o-×△×△) of a police station (Shimizu Police Station) that has jurisdiction over the position of the communication terminal (3 Ninomaru-cho, Shimizu-ku, Shizuoka City) of the user (the user name: grandpa) with the user ID: 23 corresponding to the biometric information.

[0120]

When a specific operation (for example, an operation of sliding in the left direction, or the like) for switching

to the second screen P2 is performed in a state in which the third screen P3 is displayed, the display is switched to the display of the second screen P2.

When the screen switching button display area 105 is provided on the third screen P3, the display is switched to the display of the first screen P1 by clicking the home button 105a.

[0121]

While viewing the information (the first screen P1 or the second screen P2) displayed on the display unit 12, the user of the communication terminal can display the third screen P3, for example, in a case where a state of a user of a communication terminal different from the communication terminal displaying the first screen P1 or the second screen P2 is concerned.

On the third screen P3, selection of calling instructions to a plurality of contacts is displayed.

Therefore, this makes it possible to immediately make a call to these contacts.

[0122]

By operating the sixth calling instruction area 302f and the seventh calling instruction area 302g, it is possible to make a call to a fire department or a police station close to the position information of a user of a communication terminal different from the communication

terminal displaying the third screen P3.

[0123]

(Fourth Screen P4)

The fourth screen P4 includes a first return button 401 and a first message display area 403 (refer to Fig. 11).

When the first return button 401 is clicked, the display is switched to the display of the first screen P1.

The first message display area 403 is provided with an area (a first transmission/reception target display area 403a) in which a group mark, a group name, and a user name of a message transmission/reception target are displayed, and an area (a first message content display area 403b) in which a content of a message is displayed.

[0124]

The first message content display area 403b is provided with a first message input area 403b1 (an area for inputting a character message), a first transmission button 403b2 for instructing transmission, a first image data transmission operation button 403b3 for transmitting image data such as a photograph, and a first voice data transmission operation button 403b4 for transmitting voice data such as a recorded voice.

[0125]

When characters are input in the first message input area 403b1, an input key area (not illustrated) is further

displayed.

When a character message is input to the first message input area 403b1 by operating the input key area and then the first transmission button 403b2 is clicked, the communication terminal transmits character data corresponding to said message (characters) to the information server 30, and said character message is added to the message content.

[0126]

Fig. 11 shows an example in which a character message “are you ok? (the first message)” is transmitted from the 51st communication terminal M51 of the user (the user name: papa, Taro) with the user ID: 11 to the 54th communication terminal M54 of the user (the user name: grandpa) with the user ID: 23, and then a character message “fine.” is transmitted (responded) from the 54th communication terminal M54 of the user (the user name: grandpa) with the user ID: 23 to the 51st communication terminal M51 of the user (the user name: papa, Taro) with the user ID: 11, and these messages are displayed in the first message content display area 403b.

[0127]

When the first image data transmission operation button 403b3 is clicked, an image data display area (not illustrated) in which a through image captured by a camera

of the communication terminal or an image already recorded in the communication terminal is displayed in a selectable state as a message transmission target is further displayed.

When the first transmission button 403b2 is clicked after capturing a still image from the through image or selecting a transmission target image in said image data display area, the communication terminal transmits image data corresponding to said message (image) to the information server 30, and said transmission target image is added to the message content.

[0128]

When the first voice data transmission operation button 403b4 is clicked, a voice is recorded via a microphone of the communication terminal while said click is being made or for a third time T3 (for example, T3 = 10 seconds) after said click is made.

When the first transmission button 403b2 is clicked after the end of the recording, the communication terminal transmits voice data corresponding to said message (voice) to the information server 30, and said recorded voice is added to the message content in a reproducible state.

[0129]

Also, the buttons corresponding to the first image data transmission operation button 403b3 and the first voice data transmission operation button 403b4 may be provided in

an input key area.

[0130]

(Safety Confirmation Control of Second Embodiment)

The first embodiment has described an example in which the display is switched to the third screen P3 when a specific operation (for example, an operation of sliding in the right direction, or the like) for switching to the third screen P3 is performed in a state in which the second screen P2 is displayed, that is, an example in which the biometric information program executes the third display step.

However, screen switching to the third screen P3 may be performed when there is no reply to the message transmission including a predetermined character string using the fourth screen P4 (refer to second embodiment, Figs. 12 to 14).

In addition to the screen switching to the third screen P3, making a call to a phone number corresponding to the first calling instruction area 302a or the like, a notification to a predetermined communication terminal (transmission of a predetermined message), or the like may be further performed.

[0131]

Here, a description will be given as an example as to screen switching operation control in a case where a first

message including a predetermined character string (predetermined information) is transmitted from the 51st communication terminal M51 of the user (the user name: papa, Taro) with the user ID: 11 to the 54th communication terminal M54 of the user (the user name: grandpa) with the user ID: 23.

[0132]

When the message is transmitted using the fourth screen P4, the control unit 15 of the 51st communication terminal M51 that has transmitted said message determines whether said message includes a predetermined character string related to the safety confirmation, such as “are you ok?”, that is, whether said message corresponds to the first message (refer to step S11 in Fig. 12).

The predetermined character string may be included in the biometric information program and recorded in the recording unit 13 at the time of installation, or may be set and recorded in the recording unit 13 by a user of a communication terminal.

Further, when the predetermined character string is included in said message, the control unit 15 of the 51st communication terminal M51 determines whether there is a response from the 54th communication terminal M54 of the user with the user ID: 23 (the user name: grandpa) until a first standby time TT1 (for example, TT1 = 20 minutes)

elapses after the transmission of said message (the first message) (refer to steps S12 and S13 in Fig. 12).

[0133]

The response from the 54th communication terminal M54 here defines that a message reply to the 51st communication terminal M51 of the user (the user name: papa, Taro) with the user ID: 11 is received from the 54th communication terminal M54 of the user with the user ID: 23 (the user name: grandpa) via the information server 30.

However, in the 54th communication terminal M54, when the biometric information program is activated and the first message from the 51st communication terminal M51 of the user (the user name: papa, Taro) with the user ID: 11 can be displayed (a read state), the state may be defined as a response from the 54th communication terminal M54. In this case, the information indicating said read state is transmitted (notified) to the 51st communication terminal M51 via the information server 30.

In addition, in the 54th communication terminal M54, execution of a predetermined operation (for example, a swipe operation or the like) by the user may be defined as a response from the 54th communication terminal M54. In this case, information indicating that said predetermined operation has been performed is transmitted (notified) to the 51st communication terminal M51 via the information

server 30.

[0134]

However, based on the information on the activity state of the user (the user name: grandpa) with the user ID: 23, in the case of the time zone in which the user is moving, there is a high possibility that the user (the user name: grandpa) with the user ID: 23 is safe and active. Therefore, even in a case where there is no response, the screen switching operation control may be ended.

That is, when a time zone in which the moving speed of the 54th communication terminal M54 is equal to or higher than a speed threshold value is included during the period from the transmission of the first message to the elapse of the first standby time TT1, notification of information on the presence or absence of a response from the 54th communication terminal M54 to the information server 30 to the 51st communication terminal M51 is not performed.

[0135]

When there is no response from the 54th communication terminal M54 and the biometric information parameter rp of the user (the user name: grandpa) with the user ID: 23 is 1 (the abnormality of the biometric information is detected), the control unit 15 of the 51st communication terminal M51 switches from the display of the fourth screen P4 to the display of the third screen P3 (refer to steps S14 and S21

in Fig. 12).

[0136]

When there is no response from the 54th communication terminal M54 and the biometric information parameter rp of the user (the user name: grandpa) with the user ID: 23 is 0 (the abnormality of the biometric information is not detected), the control unit 15 of the 51st communication terminal M51 transmits the second message to the 54th communication terminal M54 via the information server 30 (refer to steps S14 and S15 in Fig. 12).

In this case, the second message desirably includes information indicating that a message is automatically retransmitted by the biometric information program, such as “automatic retransmission 1”.

Further, a sound output device (an audio device, an amplifier, a speaker, or the like) of the 54th communication terminal M54 desirably outputs a reception notification sound for a longer time and/or with a larger volume when receiving the second message than when receiving the first message.

[0137]

The control unit 15 of the 51st communication terminal M51 determines whether there is a response from the 54th communication terminal M54 of the user (the user name: grandpa) with the user ID: 23 until a second standby time

TT2 (for example, TT2 = 30 minutes) elapses after the transmission of the second message (refer to steps S16 and S17 in Fig. 12).

When there is no response from the 54th communication terminal M54 and the biometric information parameter rp of the user (the user name: grandpa) with the user ID: 23 is 1 (the abnormality of the biometric information is detected), the control unit 15 of the 51st communication terminal M51 switches from the display of the fourth screen P4 to the display of the third screen P3 (refer to steps S18 and S21 in Fig. 12).

[0138]

When there is no response from the 54th communication terminal M54 and the biometric information parameter rp of the user (the user name: grandpa) with the user ID: 23 is 0 (the abnormality of the biometric information is not detected), the control unit 15 of the 51st communication terminal M51 transmits a third message to the 54th communication terminal M54 via the information server 30 (refer to steps S18 and S19 in Fig. 12).

In this case, the third message desirably includes information indicating that a message is automatically re-retransmitted by the biometric information program, such as “automatic retransmission 2”.

Further, a sound output device of the 54th

communication terminal M54 desirably outputs a reception notification sound for a longer time and/or with a larger volume when receiving the third message than when receiving the second message.

[0139]

The control unit 15 of the 51st communication terminal M51 determines whether there is a response from the 54th communication terminal M54 of the user (the user name: grandpa) with the user ID: 23 until a third standby time TT3 (for example, TT3 = 40 minutes) elapses after the transmission of the third message (refer to steps S20 in Fig. 12).

When there is no response from the 54th communication terminal M54, the control unit 15 of the 51st communication terminal M51 switches the display from the fourth screen P4 to the display on the third screen P3 (refer to step S21 in Fig. 12).

[0140]

Fig. 13 illustrates an example in which character messages “are you ok? (a first message)”, “automatic retransmission 1: are you ok? (a second message)”, and “automatic retransmission 2: are you ok? (a third message)” are transmitted from the information server 30 to the 54th communication terminal M54 of the user (the user name: grandpa) with the user ID: 23, and these character messages

are displayed in the first message content display area 403b.

The screen display example in Fig. 13 is displayed after the user (the user name: papa, Taro) with the user ID: 11 logs into the biometric information program installed in the 51st communication terminal M51 with the user ID: 11.

[0141]

The third screen P3 can be displayed when a response is not obtained even if transmission of the first message generated by the manual operation of the user and the second message automatically transmitted by the communication terminal or the like is performed.

On the third screen P3, selection of calling instructions to a plurality of contacts is displayed.

Therefore, this makes it possible to immediately make a call to these contacts.

[0142]

Thereafter, the control unit 15 of the 51st communication terminal M51 may make a call to a phone number corresponding to any one of the first calling instruction area 302a to the seventh calling instruction area 302g.

Furthermore, the control unit 15 of the 51st communication terminal M51 may transmit a predetermined

message to said phone number by SMS.

Said predetermined message includes at least one of the fact that a response from the user of the 54th communication terminal M54 is not obtained or the fact that an abnormality is detected in the biometric information on the user of the 54th communication terminal M54 (refer to Fig. 14).

[0143]

Fig. 14 illustrates an example in which a predetermined message including information indicating that the response from the user of the 54th communication terminal M54 is not obtained and the fact that no abnormality is detected in the biometric information on the user of the 54th communication terminal M54 is transmitted from the 51st communication terminal M51 to a terminal (a phone or the like) of a neighbor (Mx. Suzuki) of the user of the 54th communication terminal M54.

Further, said predetermined message may include information indicating the biometric information on the user of the 54th communication terminal M54 in time series as illustrated on the second screen P2.

Furthermore, when an e-mail address is set in the contact information database D5 or the like, the control unit 15 of the 51st communication terminal M51 may transmit said predetermined message to the set e-mail address.

[0144]

That is, the communication terminal that receives said predetermined message (the communication terminal such as the neighbor (Mx. Suzuki) of the user of the 54th communication terminal M54) receives a notification of at least one of the information on the presence or absence of the response from the 54th communication terminal M54 to the information server 30 or the information on the normal range of the biometric information on the user of the 54th communication terminal M54.

[0145]

After receiving said call, the user of the 51st communication terminal M51 may talk, or the control unit 15 of the 51st communication terminal M51 may read out said predetermined message and talk.

[0146]

The second embodiment has described an example in which the user of the first communication terminal (for example, the 51st communication terminal M51) inputs a first message, and the first message is transmitted from the first communication terminal to the second communication terminal (for example, the 54th communication terminal M54) via the information server 30. In addition, a description has been given as to an example in which the first communication terminal generates a second message and a third message,

and the second message and the third message are transmitted from the first communication terminal to the second communication terminal via the information server 30.

[0147]

However, the information server 30 may generate a second message and a third message, and the second message and the third message may be transmitted from the information server 30 to the second communication terminal.

[0148]

Further, the information server 30 may automatically generate a first message to a third message and transmit the first message to the third message to the second communication terminal (for example, the 54th communication terminal M54). When there is no response from the second communication terminal or when an abnormality is detected in the biometric information on the user of the second communication terminal, the information server 30 transmits a predetermined message to the first communication terminal or the like (refer to the third embodiment, Figs. 15 to 17).

[0149]

Hereinafter, a description will be given on the assumption that the 51st communication terminal M51 is a first communication terminal (a predetermined communication terminal) that receives the predetermined message from the information server 30, and the 54th communication terminal

M54 is a second communication terminal that receives the first message to the third message from the information server 30.

The first communication terminal that receives the predetermined message from the information server 30 corresponding to the second communication terminal is recorded in advance in the server recording unit 33 of the information server 30. For example, information (a phone number and an e-mail address) or the like of the communication terminal that receives the predetermined message from the information server 30 in correspondence with the second communication terminal is set in the contact information database D5.

Here, a description will be given on the assumption that the first communication terminal that transmits the predetermined message is the 51st communication terminal M51, but may be another communication terminal (for example, a phone set of a neighbor (first related person) corresponding to the second calling instruction area 302b) or the like.

[0150]

The 54th communication terminal M54 displays a fifth screen P5 including the first message and the like from the information server 30 (refer to Fig. 15).

[0151]

(Fifth Screen P5)

The fifth screen P5 includes a second return button 501 and a second message display area 503.

When the second return button 501 is clicked, the display is switched to the display of the first screen P1.

The second message display area 503 is provided with an area (a second transmission/reception target display area 503a) in which a user name (here, the information server 30) of a message transmission/reception target is displayed and an area (a second message content display area 503b) in which a content of a message is displayed.

[0152]

The second message content display area 503b is provided with a second message input area 503b1 (an area for inputting a character message), a second transmission button 503b2 for instructing transmission, a second image data transmission operation button 503b3 for transmitting image data such as a photograph, and a second voice data transmission operation button 503b4 for transmitting voice data such as a recorded voice.

[0153]

The second message input area 503b1 corresponds to the first message input area 403b1 of the fourth screen P4.

The second transmission button 503b2 corresponds to the first transmission button 403b2 of the fourth screen P4.

The second image data transmission operation button 503b3 corresponds to the first image data transmission operation button 403b3 of the fourth screen P4.

The second voice data transmission operation button 503b4 corresponds to the first voice data transmission operation button 403b4 of the fourth screen P4.

[0154]

Fig. 15 shows an example in which character messages “automatic transmission: are you ok? (a first message)”, “automatic retransmission 1: are you ok? (a second message)”, “automatic retransmission 2: are you ok? (a third message)” are transmitted from the information server 30 to the 54th communication terminal M54 of the user (the user name: grandpa) with the user ID: 23, and then a character message “I’m okay” is transmitted (responded) from the 54th communication terminal M54 of the user (the user name: grandpa) with the user ID: 23 to the information server 30, and these messages are displayed in the second message content display area 503b.

The screen display example of Fig. 15 is displayed after the user (the user name: grandpa) with the user ID: 23 logs into the biometric information program installed in the 54th communication terminal M54 with the user ID: 23.

[0155]

(Safety Confirmation Control of Third Embodiment)

The server control unit 35 of the information server 30 generates a message (a first message) for safety confirmation, and transmits the first message to the 54th communication terminal M54 of the user (the user name: grandpa) with the user ID: 23 (a first message transmission step, refer to step S31 in Fig. 16).

In this case, the first message desirably includes information indicating that the message is automatically transmitted by the biometric information program, such as “automatic transmission”.

Transmission of the first message is periodically performed at predetermined time intervals (for example, daily between 7:00 and 8:00). However, the first message may be transmitted non-periodically, such as randomly.

[0156]

The server control unit 35 of the information server 30 determines whether there is a response from the 54th communication terminal M54 of the user (the user name: grandpa) with the user ID: 23 until the first standby time TT1 elapses after transmission of the first message (refer to steps S32 and S33 in Fig. 16).

[0157]

When there is no response from the 54th communication terminal M54 and the biometric information parameter rp of the user (the user name: grandpa) with the user ID: 23 is 1

(the abnormality of the biometric information is detected), the server control unit 35 of the information server 30 performs a notification to a predetermined communication terminal (the first communication terminal) (a first notification step, refer to steps S34 and S41 in Fig. 16).

Specifically, the server control unit 35 of the information server 30 transmits a predetermined message to the 51st communication terminal M51 by SMS.

Said predetermined message includes information indicating that the response from the user of the 54th communication terminal M54 is not obtained and the fact that the abnormality is detected in the biometric information on the user of the 54th communication terminal M54 (refer to Fig. 17). It is noted that said predetermined message includes information indicating that the abnormality has been detected in the biometric information on the user of the 54th communication terminal M54, and information indicating that the response from the user of the 54th communication terminal M54 cannot be obtained may be omitted.

Further, said predetermined message may include information indicating the biometric information on the user of the 54th communication terminal M54 in time series as illustrated on the second screen P2.

That is, the 51st communication terminal M51 receives,

from the information server 30, a notification including at least one of the information on the presence or absence of the response from the 54th communication terminal M54 to the information server 30 or the information on the normal range of the biometric information on the user of the 54th communication terminal M54.

[0158]

Further, in the notification to the 51st communication terminal M51, the server control unit 35 of the information server 30 may make a call to the 51st communication terminal M51, and after receiving said call, the server control unit 35 of the information server 30 may read out said predetermined message and may talk.

[0159]

When there is no response from the 54th communication terminal M54 and the biometric information parameter rp of the user (the user name: grandpa) with the user ID: 23 is 0 (the abnormality of the biometric information is not detected), the server control unit 35 of the information server 30 transmits a second message (a second message transmission step, and refer to steps S34 and S35 in Fig. 16).

In this case, the second message desirably includes information indicating that a message is automatically retransmitted by the biometric information program, such as

“automatic retransmission 1”.

Further, a sound output device of the 54th communication terminal M54 desirably outputs a reception notification sound for a longer time and/or with a larger volume when receiving the second message than when receiving the first message.

[0160]

The server control unit 35 of the information server 30 determines whether there is a response from the 54th communication terminal M54 of the user (the user name: grandpa) with the user ID: 23 until the second standby time TT2 elapses after transmission of the second message (refer to steps S36 and S37 in Fig. 16).

When there is no response from the 54th communication terminal M54 and the biometric information parameter rp of the user (the user name: grandpa) with the user ID: 23 is 1 (the abnormality of the biometric information is detected), the server control unit 35 of the information server 30 notifies a predetermined communication terminal (the first communication terminal) of the abnormality (a second notification step, refer to steps S38 and S41 in Fig. 16).

[0161]

When there is no response from the 54th communication terminal M54 and the biometric information parameter rp of the user (the user name: grandpa) with the user ID: 23 is 0

(the abnormality of the biometric information is not detected), the server control unit 35 of the information server 30 transmits a third message (a third message transmission step, and refer to steps S38 and S39 in Fig. 16).

In this case, the third message desirably includes information indicating that a message is automatically re-retransmitted by the biometric information program, such as “automatic retransmission 2”.

Further, a sound output device of the 54th communication terminal M54 desirably outputs a reception notification sound for a longer time and/or with a larger volume when receiving the third message than when receiving the second message.

[0162]

The server control unit 35 of the information server 30 determines whether there is a response from the 54th communication terminal M54 of the user (the user name: grandpa) with the user ID: 23 until the third standby time TT3 elapses after transmission of the third message (refer to step S40 in Fig. 16).

When there is no response from the 54th communication terminal M54, the server control unit 35 of the information server 30 notifies a predetermined communication terminal (the first communication terminal) (a third notification

step, refer to step S41 in Fig. 16).

Specifically, the server control unit 35 of the information server 30 transmits a predetermined message to the 51st communication terminal M51 by SMS.

The predetermined message includes information indicating that the response from the user of the 54th communication terminal M54 is not obtained.

[0163]

When the response cannot be obtained from the second communication terminal even if the information server 30 automatically transmits a message a plurality of times, a notification is given to the first communication terminal. That is, the first communication terminal is notified of biometric information or the like of another user (the user of the second communication terminal). Before said notification is given, a plurality of times of message transmission and abnormality confirmation of the biometric information are performed. Therefore, it is possible to suppress unnecessary notification such as absence of the abnormality of the biometric information only by overlooking the notification of the first message.

[0164]

The third embodiment has described an example in which the first message is displayed on the fifth screen P5 of the second communication terminal as an output of said

first message or the like.

However, the output of the first message or the like is not limited to video, and may be audio. That is, the sound output device of the 54th communication terminal M54 outputs the content of the first message by voice.

[0165]

Additionally, a description has been given as to an example in which the predetermined message includes the information on whether the biometric information on the user of the second communication terminal includes the information out of the normal range. Alternatively or additionally, the predetermined message may include the biometric information on the user of the second communication terminal.

Reference Signs List

[0166]

1 Position information output system

11 Communication unit

12 Display unit

13 Recording unit

15 Control unit

16 Biometric information acquisition unit

20 Information source transmission unit

30 Information server

31 Server communication unit

33 Server recording unit

35 Server control unit

70 Input/output terminal

90 External information device

101 Disaster information display area

103 User position information display area

105 Screen switching button display area

105a Home button

105b Chat button

105c Disaster information button

105d Shelter button

105e Setting button

201 First name display area

202 Biometric information display area

202a Body temperature display area

202b Pulse display area

202c Blood pressure display area

202d Activity state display area

301 Second name display area

302 Contact name display area

302a First calling instruction area (call to person himself or herself)

302b Second calling instruction area (call to first related person)

302c Third calling instruction area (call to second related person)

302d Fourth calling instruction area (call to emergency consultation center)

302e Fifth calling instruction area (call to police consultation dedicated phone)

302f Sixth calling instruction area (call to nearest fire department of person himself or herself)

302g Seventh calling instruction area (call to nearest police station of person himself or herself)

401 First return button

403 First message display area

403a First transmission/reception target display area

403b First message content display area

403b1 First message input area

403b2 First transmission button

403b3 First image data transmission operation button

403b4 First voice data transmission operation button

501 Second return button

503 Second message display area

503a Second transmission/reception target display area

503b Second message content display area

503b1 Second message input area

503b2 Second transmission button

503b3 Second image data transmission operation button

503b4 Second voice data transmission operation button

D1 Position information database

D2 Biometric information database

D3 Group information database

D4 Institution information database

D5 Contact information database

dp1 First detail level parameter

dp2 Second detail level parameter

M51 51st communication terminal

M52 52nd communication terminal

M53 53rd communication terminal

M54 54th communication terminal

M55 55th communication terminal

ma1 Disaster level mark

ma2 Safety unconfirmed mark

ma3 Biometric abnormality mark

P1 First screen

P2 Second screen

P3 Third screen

P4 Fourth screen

P5 Fifth screen

sp Safety type parameter

T1 First time (transmission interval of position information and biometric information)

T2 Second time (target period for determining whether mode

is abnormal mode)

T3 Third time (recording time)

TT1 First standby time

TT2 Second standby time

TT3 Third standby time

CLAIMS

1. An information transmission system comprising:

a first communication terminal;

a second communication terminal; and

an information server configured to communicate with the first communication terminal and the second communication terminal, wherein:

the second communication terminal includes a biometric information acquisition unit configured to acquire biometric information on a user of the second communication terminal,

the information server records a biometric information database including the biometric information on the user of the second communication terminal, wherein the biometric information is transmitted from the second communication terminal, and information on a normal range of the biometric information,

a first message including predetermined information is transmitted from the information server to the second communication terminal,

a second message including the predetermined information is transmitted from the information server to the second communication terminal when there is no response from the second communication terminal to the information

server until a first standby time elapses after transmission of the first message,

the second communication terminal displays a screen including the first message,

when the second message is transmitted to the second communication terminal, the screen including the first message in the second communication terminal includes the second message,

when there is the response from the second communication terminal to the information server, the screen including at least the first message in the second communication terminal includes a message related to the response from the second communication terminal to the information server,

the first communication terminal receives, from the information server, a notification of information on presence or absence of the response from the second communication terminal to the information server and/or at least one of the biometric information on the user of the second communication terminal or information on whether the biometric information includes information out of the normal range,

the biometric information on the user of the second communication terminal is acquired by the biometric information acquisition unit and is transmitted from the

second communication terminal to the information server,

the information on whether the biometric information includes the information out of the normal range is generated by the information server based on the biometric information database,

the notification of the information on the presence or absence of the response from the second communication terminal to the information server is any one of a reply of at least one of the first message or the second message transmitted from the second communication terminal to the first communication terminal via the information server, transmission of information to the first communication terminal via the information server, the information indicating that the second communication terminal is able to display the first message transmitted from the first communication terminal, and transmission of information to the first communication terminal via the information server, the information indicating that a predetermined operation has been performed in the second communication terminal,

the information server determines whether a message input to the first communication terminal and transmitted from the first communication terminal to the second communication terminal via the information server corresponds to the first message by determining whether the message include a predetermined character string as the

predetermined information,

the second message is generated by any one of the first communication terminal and the information server,

the second message includes information indicating that automatic retransmission is performed by any one of the first communication terminal and the information server and includes the predetermined information,

the first communication terminal displays a screen including the first message,

when the second message is transmitted to the second communication terminal, the screen including the first message in the first communication terminal includes the second message,

when there is the response from the second communication terminal to the information server, the screen including at least the first message in the first communication terminal includes the message related to the response from the second communication terminal to the information server,

the biometric information acquisition unit includes a detection unit configured to detect position information and acceleration of the second communication terminal,

the position information and the acceleration obtained by the detection unit are transmitted as the biometric information from the second communication terminal to the

information server, and

the notification from the information server to the first communication terminal is not performed even if there is no response from the second communication terminal to the information server until the first standby time elapses after the transmission of the first message, when a time zone in which a moving speed of the second communication terminal, the moving speed being calculated based on the position information and the acceleration obtained by the detection unit, is equal to or higher than a speed threshold value is included before the first standby time elapses.

2. The information transmission system according to claim 1, wherein:

the first message and the second message are generated by any one of the first communication terminal and the information server at predetermined time intervals,

the first message includes information indicating that automatic transmission is performed by any one of the first communication terminal and the information server and includes the predetermined information, and

the second message includes information indicating that automatic retransmission is performed by any one of the first communication terminal and the information server and includes the predetermined information.

3. The information transmission system according to claim 1 or 2, wherein:

a third message including the predetermined information is transmitted from the information server to the second communication terminal when there is no response from the second communication terminal to the information server until a second standby time elapses after transmission of the second message,

the third message is generated by any one of the first communication terminal and the information server,

the third message includes information indicating that automatic re-retransmission is performed by any one of the first communication terminal and the information server and includes the predetermined information,

the second communication terminal outputs a reception notification sound for a longer time and/or with a larger volume when receiving the second message than when receiving the first message,

the second communication terminal outputs a reception notification sound for a longer time and/or with a larger volume when receiving the third message than when receiving the second message,

when the third message is transmitted to the second communication terminal, a screen including the first message and the second message in the second communication

terminal includes the third message,

when there is no response from the second communication terminal to the information server and the biometric information includes the information out of the normal range until the second standby time elapses after the transmission of the second message, the first communication terminal receives, from the information server, a notification of at least one of the biometric information on the user of the second communication terminal or the information on whether the biometric information includes the information out of the normal range,

when there is no response from the second communication terminal to the information server until a third standby time elapses after transmission of the third message, the first communication terminal receives, from the information server, a notification of information on presence or absence of the response from the second communication terminal to the information server for at least one of the first message, the second message, or the third message, and

the notification of the information on the presence or absence of the response from the second communication terminal to the information server is any one of a reply of at least one of the first message, the second message, or the third message transmitted from the second communication

terminal to the first communication terminal via the information server, transmission of information to the first communication terminal via the information server, the information indicating that the second communication terminal is able to display the first message transmitted from the first communication terminal, and transmission of information to the first communication terminal via the information server, the information indicating that a predetermined operation has been performed in the second communication terminal.

4. The information transmission system according to claim 1, wherein:

the information server records a position information database including position information on the second communication terminal, and

the first communication terminal displays, based on the position information database and the biometric information database, the position information on the second communication terminal and at least one of the biometric information on the user of the second communication terminal or the information on whether the biometric information includes the information out of the normal range.

5. The information transmission system according to claim 4, wherein:

the first communication terminal displays the screen including the first message,

when the second message is transmitted to the second communication terminal, the screen including the first message in the first communication terminal includes the second message,

when there is the response form the second communication terminal to the information server, the screen including at least the first message in the first communication terminal includes the message related to the response from the second communication terminal to be information server,

the biometric information acquisition unit includes a detection unit configured to detect position information on the second communication terminal,

the position information obtained by the detection unit is transmitted as the biometric information from the second communication terminal to the information server, and

the first communication terminal displays, based on the position information database and the biometric information database, a first screen including the position information on the second communication terminal and the information on whether the biometric information on the user of the second communication terminal includes the information out of the normal range in a switchable state from the screen

including the first message.

6. The information transmission system according to claim 5, wherein the first communication terminal displays, based on the biometric information database, a second screen showing, in time series, the biometric information on the user of the second communication terminal in a switchable state from the first screen or the screen including the first message.

7. The information transmission system according to claim 6, wherein:

the first screen includes, as the information on whether the biometric information on the user of the second communication terminal includes the information out of the normal range, a biometric abnormality mark turned on when the biometric information on the user of the second communication terminal includes the information out of the range, and

when the biometric abnormality mark included in the first screen is operated in a state in which the first screen is displayed on the first communication terminal, the first communication terminal switches to display of the second screen.

8. The information transmission system according to claim 7, wherein:

the first communication terminal displays a third

screen including a calling instruction area for a phone number of the user of the second communication terminal, a calling instruction area for a phone number of person related to the user of the second communication terminal, and a calling instruction area for a phone number of a predetermined institution,

the third screen includes, as the calling instruction area for the phone number of the predetermined institution, a calling instruction area for a phone number of at least one of a fire department or a police station specified based on the position information on the second communication terminal, and

when a specific operation is performed in a state in which the second screen is displayed on the first communication terminal, the first communication terminal switches to display of the third screen.

9. The information transmission system according to claim 6, wherein:

the second screen includes an activity state display area indicating, in time series, information on whether the user of the second communication terminal is active and information on whether the user of the second communication terminal is moving,

when the second communication terminal is being operated or when acceleration of the second communication

terminal is equal to or greater than an acceleration threshold value, it is determined that the user of the second communication terminal is active, and

when a moving speed of the second communication terminal is equal to or higher than a speed threshold value, it is determined that the user of the second communication terminal is moving.

10. The information transmission system according to claim 6, wherein the second screen includes an activity state display area including, in time series, information on whether the user of the second communication terminal is active and information on whether the user of the second communication terminal is moving, and at least one of a body temperature display area illustrating a time-series change in a body temperature of the user of the second communication terminal and information on a normal range of the body temperature, a pulse information display area illustrating a time-series change in a pulse of the user of the second communication terminal and information on a normal range of the pulse, or a blood pressure information display area illustrating a time-series change in a blood pressure of the user of the second communication terminal and information on a normal range of the blood pressure.

11. The information transmission system according to claim 4, wherein the information server varies, based on external

information, the normal range of the biometric information.

12. The information transmission system according to claim 5, wherein:

at least one of the first communication terminal or the information server determines, a based on the information on whether the biometric information on the user of the second communication terminal includes the information out of the normal range, a detail level of the position information on the second communication terminal displayed on the first screen,

when the biometric information on the user of the second communication terminal includes the information out of the normal range, the position information on the second communication terminal is displayed on the first screen at a fine position information level, and

when the biometric information on the user of the second communication terminal does not include the information out of the normal range, the position information on the second communication terminal is displayed on the first screen at the fine position information level or at a position information level coarser than the fine position information level.

13. A method of transmitting and receiving information between a first communication terminal and a second communication terminal via an information server configured

to communicate with the first communication terminal and the second communication terminal, wherein:

the second communication terminal includes a biometric information acquisition unit configured to acquire biometric information on a user of the second communication terminal, and

the information server records a biometric information database including the biometric information on the user of the second communication terminal, wherein the biometric information is transmitted from the second communication terminal, and information on a normal range of the biometric information,

the method comprising:

a first message transmission step of transmitting, by the information server, a first message including predetermined information to the second communication terminal;

a second message transmission step of transmitting, by the information server, a second message including the predetermined information to the second communication terminal when there is no response from the second communication terminal to the information server until a first standby time elapses after transmission of the first message;

a notification step of notifying, by the information

server, the first communication terminal of information on presence or absence of the response from the second communication terminal to the information server and/or at least one of the biometric information on the user of the second communication terminal or information on whether the biometric information includes information out of the normal range,

a third message transmission step of transmitting, by the information server, a third message including the predetermined information to the second communication terminal when there is no response from the second communication terminal to the information server until a second standby time elapses after transmission of the second message;

a first notification step of notifying, as one of the notification steps performed by the information server, the first communication terminal of at least one of the biometric information on the user of the second communication terminal or the information on whether the biometric information includes the information out of the normal range when there is no response from the second communication terminal to the information server and the biometric information includes the information out of the normal range until the first standby time elapses after the transmission of the first message;

a second notification step of notifying, as one of the notification steps performed by the information server, the first communication terminal of at least one of the biometric information on the user of the second communication terminal or the information on whether the biometric information includes the information out of the normal range when there is no response from the second communication terminal to the information server and the biometric information includes the biometric information out of the normal range until the second standby time elapses after the transmission of the second message; and

a third notification step of notifying, as one of the notification steps performed by the information server, the first communication terminal of information on presence or absence of the response from the second communication terminal to the information server for at least one of the first message, the second message, or the third message when there is no response from the second communication terminal to the information server until a third standby time elapses after transmission of the third message,

wherein:

the second communication terminal displays a screen including the first message,

when the second message is transmitted to the second communication terminal, the screen including the first

message in the second communication terminal includes the second message,

when there is the response from the second communication terminal to the information server, the screen including at least the first message in the second communication terminal includes a message related to the response from the second communication terminal to the information server,

the biometric information on the user of the second communication terminal is acquired by the biometric information acquisition unit and is transmitted from the second communication terminal to the information server,

the information on whether the biometric information includes the information out of the normal range is generated by the information server based on the biometric information database,

the notification of the information on the presence or absence of the response from the second communication terminal to the information server is any one of a reply of at least one of the first message or the second message transmitted from the second communication terminal to the first communication terminal via the information server, transmission of information to the first communication terminal via the information server, the information indicating that the second communication terminal is able

to display the first message transmitted from the first communication terminal, and transmission of information to the first communication terminal via the information server, the information indicating that a predetermined operation has been performed in the second communication terminal,

the second message includes information indicating that automatic retransmission is performed by any one of the first communication terminal and the information server and includes the predetermined information,

the third message includes information indicating that automatic re-retransmission is performed by any one of the first communication terminal and the information server and includes the predetermined information,

when the third message is transmitted to the second communication terminal, a screen including the first message and the second message in the second communication terminal includes the third message,

the first communication terminal displays a screen including the first message,

when the second message is transmitted to the second communication terminal, the screen including the first message in the first communication terminal includes the second message,

when there is the response from the second communication terminal to the information server, the

screen including at least the first message in the first communication terminal includes the message related to the response from the second communication terminal to the information server,

the biometric information acquisition unit includes a detection unit configured to detect position information and acceleration of the second communication terminal,

the position information and the acceleration obtained by the detection unit are transmitted as the biometric information from the second communication terminal to the information server,

when a time zone in which a moving speed of the second communication terminal, the moving speed being calculated based on the position information and the acceleration obtained by the detection unit, is equal to or higher than a speed threshold value is included until the first standby time elapses, the notification step is not performed by the information server even if there is no response from the second communication terminal to the information server until the first standby time elapses after the transmission of the first message, and

the notification of the information on the presence or absence of the response from the second communication terminal to the information server is any one of a reply of at least one of the first message, the second message, or

the third message transmitted from the second communication terminal to the first communication terminal via the information server, transmission of information to the first communication terminal via the information server, the information indicating that the second communication terminal is able to display the first message transmitted from the first communication terminal, and transmission of information to the first communication terminal via the information server, the information indicating that a predetermined operation has been performed in the second communication terminal.