

DESCRIPTION

Title: MANAGEMENT SERVER, MESSAGE COMMUNICATION METHOD, AND
MESSAGE COMMUNICATION PROGRAM

5 **Technical Field**

[0001]

The present invention relates to a management server, a message communication method, and a message communication program.

10 **Background Art**

[0002]

In recent years, an enterprise or a store often provides various information to mobile communication terminals such as smartphones by using a short message service (hereinafter, referred to as SMS). However, in a case where information is provided by using the SMS, since an enterprise or the like transmits a short message to many destinations, a short message is often transmitted to users by randomly using several phone numbers. In this case, however, when a reply to a short message is transmitted from a transmission destination to a transmission source of the short message, because a phone number of the transmission source is used to transmit a message to other users in some cases, one-to-one message exchange cannot be performed, which is problematic.

[0003]

Further, in some contracts with a telecommunications carrier (hereinafter, referred to as a carrier) that owns a mobile communication network, or specifications, for

5 example, a normal phone number may not be assigned as a transmission source of a short message, and thus a transmission destination may not transmit a short message to the transmission source.

[0004]

10 As one of technologies using the SMS, a technology in which an information terminal device starts a text chat program to display short messages transmitted and received between users on one screen window by changing a user interface has been disclosed (see Patent Literature 1).

15

Citation List

Patent Literature

[0005]

Patent Literature 1: JP 2009-526430 T

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Summary of Invention

Technical Problem

[0006]

25 However, the above-described gazette merely describes a technology related to a short message using a

phone number that can be used for transmission and reception between users, and does not consider a case where a company such as an enterprise with no fixed phone number as a transmission source and multiple users transmit and
5 receive a message to and from each other. Therefore, a problem that a user cannot transmit a message to a transmission source with no fixed phone number to reply to a short message transmitted from the transmission source to the user could not be solved. Further, for example, in a
10 case where a company does not use a normal phone number, a user cannot transmit a short message to the company.

[0007]

The present invention has been made in view of the above problems, and an object of the present invention is
15 to provide a management server, a message communication method, and a message communication program which enable transmission of a message to a transmission source even when a short message is received from a transmission source with no fixed phone number or when a short message cannot
20 be transmitted as a reply to a transmission source.

Solution to Problem

[0008]

In order to solve the above-described problems,
25 according to the present invention, a company ID for

identifying a company, a user phone number that is a phone number of a portable terminal device operated by a user, and a message to be transmitted to the user are received in association with one another from an information terminal device, a URL for instructing generation of a web page including a message input region for each chat ID indicating a combination of the company ID and the user phone number is generated, a short message including the message received from the information terminal device and the URL is generated, and the generated short message is transmitted to the user phone number as a destination.

Advantageous Effects of Invention

[0009]

15 According to the present invention configured as described above, since a user can receive a URL for instructing generation of a web page including a message input region through a short message, a message can be transmitted to a transmission source even when a short message is received from a transmission source with no fixed phone number or when a short message cannot be transmitted as a reply to a transmission source.

Brief Description of Drawings

25 [0010]

Fig. 1 is a configuration diagram of a message communication system 10 according to the present embodiment.

Fig. 2 is an explanatory diagram illustrating an
5 example of a data configuration of a management information storage unit 110.

Fig. 3 is an explanatory diagram illustrating an example of a data configuration of a message storage unit 120.

10 Fig. 4 is an explanatory diagram illustrating an example of a data configuration of a bot message storage unit 130.

Fig. 5 is a flowchart illustrating a short message transmission processing procedure performed by a management
15 server 100.

Fig. 6 is a flowchart illustrating a web page display processing procedure performed by a portable terminal device 300.

Fig. 7 is an explanatory diagram illustrating an
20 example of a screen displayed on a display unit of the portable terminal device 300.

Fig. 8 is a flowchart illustrating a web page generation processing procedure performed by the management server 100.

25 Fig. 9 is a flowchart illustrating a web page

display processing procedure performed by an information terminal device 200.

Fig. 10 is an explanatory diagram illustrating an example of a web page screen displayed on a display unit of the information terminal device 200.

Fig. 11 is a flowchart illustrating a message management processing procedure performed by the management server 100 and the information terminal device 200.

Fig. 12 is an explanatory diagram illustrating an example of a management web page screen displayed on the display unit of the information terminal device 200.

Fig. 13 is an explanatory diagram illustrating an example of an opt-out screen displayed on the display unit of the portable terminal device 300.

15

Description of Embodiments

[0011]

Hereinafter, embodiments of the present invention will be described with reference to the accompanying drawings. Note that the following description is an example of the embodiments, and the present invention is not limited to these embodiments.

[0012]

Fig. 1 is a configuration diagram of a message communication system 10 according to the present

embodiment. As illustrated in Fig. 1, the message communication system 10 connects a management server 100, information terminal devices (companies) 200-1 to 200-n operated by a so-called company such as an enterprise, a
5 store, or an individual who is a short message transmission source, and portable terminal devices (users) 300-1 to 300-m operated by a user who is a short message transmission destination to one another in a mutually communicable manner via a network N. The network N is partially or
10 entirely wired or wireless, and is a communication network such as the Internet, an intranet, a local area network (LAN), or a mobile communication network.

[0013]

The management server 100 is a so-called web server
15 that receives a hypertext transfer protocol (HTTP) request between the information terminal devices (companies) 200-1 to 200-n (hereinafter, referred to as the information terminal device 200) and the portable terminal devices (users) 300-1 to 300-m (hereinafter, referred to as the
20 portable terminal device 300) and transmits a response to the request. The management server 100 generates a short message including a message received from the information terminal devices 200 and a uniform resource locator (URL) for instructing generation of a web page, and transmits the
25 short message to the portable terminal device 300 by using

a phone number of the portable terminal device 300 (hereinafter, referred to as a user phone number) as a destination. The management server 100 generates and transmits a web page in response to a request or a message
5 input in the information terminal device 200 or the portable terminal device 300.

[0014]

The information terminal device 200 is a personal computer, a smartphone, a cellular phone, a tablet terminal
10 device, or the like operated by a company. The information terminal device 200 accepts an input of a message to be transmitted to a user or a phone number and transmits the input to the management server 100. The information terminal device 200 displays a web page showing message
15 exchange with each user or a management web page showing a status of transmission/reception of a message to and from each user or a browsing status, and accepts an input of a message for a user.

[0015]

20 The portable terminal device 300 is a smartphone, a cellular phone, or another device operated by a user, and can be any information processing device as long as it can transmit and receive a short message and includes a web browser to be able to display a web page. The portable
25 terminal device 300 receives the short message from the

management server 100, displays a web page showing message exchange with a company, and accepts an input of a message.

[0016]

Next, a configuration of the management server 100
5 will be described. The management server 100 includes a management information storage unit 110, a message storage unit 120, a bot message storage unit 130, a transmission/reception unit 101, a uniform resource locator (URL) generation unit 102, a web page generation unit 103,
10 a short message generation unit 104, and a mail generation unit 105.

[0017]

Fig. 2 is an explanatory diagram illustrating an example of a data configuration of a management information
15 storage unit 110. The management information storage unit 110 stores information for managing messages exchanged between a user and a company. The management information storage unit 110 stores a company ID which is information for identifying a company, a user phone number which is a
20 destination of a short message and also is information for identifying a user, a chat ID which indicates a combination of a user and a company, a URL (user/company) presented to the user or the company, a date and time of reception of the latest message (user/company), a date and time of last
25 browsing (user/company), and other information, in

association with one another.

[0018]

Here, the date and time of reception of the latest message (user/company) is a date and time when the

5 management server 100 receives an input message accepted in a web page displayed on the information terminal device 200 or the portable terminal device 300, and a date and time of last reception is stored by updating each time the message is received. Note that the portable terminal device 300

10 may be set to transmit, to the management server 100, a notification that a short message transmitted to the portable terminal device 300 is displayed on a display unit of the portable terminal device 300 when the short message is displayed, and a date and time of reception of the

15 notification that the short message is displayed may be stored as the date and time of reception of the latest message of the user, or a date and time of displaying of a short message of the user may be stored in the management information storage unit 110 separately from the date and

20 time of reception of the latest message of the user. In addition, a date and time when the short message is transmitted to the portable terminal device 300 is stored in a date and time of first reception of the latest message of the company and a date and time of last browsing. The

25 date and time of last browsing (user/company) is a date and

time when a web page is transmitted to the information terminal device 200 or the portable terminal device 300 in response to the request transmitted from the information terminal device 200 or the portable terminal device 300, and the date and time of last browsing is stored by updating each time the web page is transmitted.

[0019]

Fig. 3 is an explanatory diagram illustrating an example of a data configuration of a message storage unit 120. The message storage unit 120 stores a message received from the information terminal device 200 or the portable terminal device 300 and information on the message. The message storage unit 120 stores a message ID which is information for identifying a message, a chat ID, a message transmitted as a short message or an input message accepted in a web page, a sender of the message, a date and time of reception of the message which is a date and time when the management server 100 receives the message, a notification (done or not) indicating whether or not inputting of the message is notified to a transmission source, browsing (browsed or unbrowsed) indicating whether or not a transmission destination of the message has browsed the web page, a template ID which is information for identifying a bot program (hereinafter, referred to as the BOT) in a case of making a response from the company by

using the BOT, and other information, in association with one another.

[0020]

Data stored in the management information storage unit 110 and data stored in the message storage unit 120 are deleted when a predetermined period (for example, 30 days) has elapsed. For example, in a case where messages are sequentially deleted from the message storage unit 120 when a predetermined period has elapsed from a date and time of reception of the messages, and all messages exchanged between the user and the company are deleted, data associated with a chat ID of which all the messages are deleted from the message storage unit 120 may be deleted from the management information storage unit 110. Further, in a case where a predetermined period has elapsed from the date and time of reception of the latest message stored in the management information storage unit 110, all data associated with the chat ID and stored in the management information storage unit 110 and the message storage unit 120 may be deleted. Note that when deleting the data stored in the management information storage unit 110 and the message storage unit 120, target data are deleted after being archived in another storage unit.

[0021]

Fig. 4 is an explanatory diagram illustrating an

example of a data configuration of a bot message storage unit 130. The bot message storage unit 130 stores a message to be presented to the user when the response from the company to the user is made by using the BOT, and
5 information on the message. The bot message storage unit 130 stores a template ID, a transmission order, a company ID, an option, a bot message corresponding to the option, and other information, in association with one another.

[0022]

10 The transmission/reception unit 101 receives a company ID, a user phone number, and a message for each user, transmitted from the information terminal device 200. The transmission/reception unit 101 transmits a short
15 transmission/reception unit 101 transmits a web page in response to a request from the information terminal device 200 or the portable terminal device 300. The transmission/reception unit 101 receives an accepted message from a web page displayed on the display unit of
20 the information terminal device 200 or the portable terminal device 300. The transmission/reception unit 101 transmits a mail to the information terminal device 200.

[0023]

 The URL generation unit 102 generates a URL
25 associated with a chat ID and a distinction between a user

and a company. The URL generation unit 102 stores the generated URL in association with the chat ID and the distinction between the user and the company, in the management information storage unit 110.

5 [0024]

The web page generation unit 103 generates a web page that displays a message exchanged between the user and the company and a message input region. More specifically, the web page generation unit 103 generates a web page by
10 using a web page generation program associated with a URL. The web page generation program is executed when a request including a URL is received from the information terminal device 200 or the portable terminal device 300 and redirecting to a web page generation program associated
15 with the URL is performed. The web page generation program obtains a message corresponding to a chat ID determined based on the URL, or a message corresponding to a chat ID as a parameter of the web page generation program itself from the message storage unit 120, and generates a web page
20 including a message input region and in which the obtained message is arranged according to the distinction between the user and the company. Further, the web page generation unit 103 generates a management web page.

[0025]

25 The short message generation unit 104 generates a

short message based on a user phone number and a message received from the information terminal device 200. More specifically, the short message generation unit 104 generates a short message that includes a message to be transmitted from a company to a user and a URL for the user generated by the URL generation unit 102, and is addressed to a user phone number as a destination. When an input of a message is accepted in a web page displayed on the information terminal device 200, that is, when a message is input by a company, the short message generation unit 104 generates a short message indicating that the message is input and including a URL for a user.

[0026]

When an input of a message is accepted in a web page displayed on the portable terminal device 300, that is, when a message is input by a user, the mail generation unit 105 generates a mail indicating that the message is input, including a URL for a company, and addressed to a mail address of the company as a destination.

[0027]

Short message transmission processing performed by the management server 100 of the message communication system 10 configured as described above will be described. Fig. 5 is a flowchart illustrating a short message transmission processing procedure performed by the

management server 100.

[0028]

The transmission/reception unit 101 receives a company ID, a user phone number, and a message from the information terminal device 200 (Step S501). Note that the transmission/reception unit 101 may receive the company ID, a user phone number, and a message as a service of an application service provider (ASP).

[0029]

10 The URL generation unit 102 determines a chat ID indicating a combination of a company ID and a user phone number (Step S502). The chat ID is information for uniquely identifying a combination of a company ID and a user phone number. The URL generation unit 102 generates a chat ID and URLs for each user and each company (Step 15 S503). Here, when a request including the URL is transmitted from the information terminal device 200 or the portable terminal device 300 to the management server 100, the chat ID and the URLs for each user and each company are 20 redirected to a web page generation program corresponding to each URL. The web page generation program generates a web page displaying a message exchanged between the company and the user and a message input region. The URL generation unit 102 stores the URLs for the user and the 25 company in association with the chat ID, in the management

information storage unit 110 (Step S504). The URL generation unit 102 stores a newly numbered message ID, the chat ID, the message transmitted from the information terminal device 200, the company which is a sender, and a
5 date and time of reception of the message in association with one another, in the message storage unit 120 (Step S505). The short message generation unit 104 generates a short message including the message received from the information terminal device 200 and the URL for the user
10 (Step S506). The transmission/reception unit 101 transmits the short message to the user phone number as a destination (Step S507).

[0030]

As described above, as a URL that can instruct
15 generation of a web page including a message for a user and a message input region is transmitted to the user through a short message, even in a case where a phone number as a transmission source of the short message is not fixed, or even in a case where a short message cannot be transmitted
20 from a transmission destination to a transmission source, a message can be transmitted to a company through the message input region of the web page between the company and the user. As a result, a message can be immediately transmitted to a user with a high arrival rate through a
25 short message addressed to a user phone number as a

destination, and the message can be transmitted from the user who is a transmission source to a company who is a transmission source.

[0031]

5 Next, web page display processing performed by the portable terminal device 300 of the message communication system 10 will be described. Fig. 6 is a flowchart illustrating a web page display processing procedure performed by the portable terminal device 300.

10 [0032]

 The portable terminal device 300 receives a short message transmitted from the management server 100 (Step S601). The portable terminal device 300 displays the short message on the display unit (Step S602). Fig. 7 is an
15 explanatory diagram illustrating an example of a screen displayed on the display unit of the portable terminal device 300. Fig. 7(a) shows an example of an SMS screen. As illustrated in Fig. 7(a), a message 71 for each user transmitted from a company and a message 72 including a URL
20 are displayed. In this example of the screen, two messages are transmitted from the management server 100 in consideration of a limitation of the number of characters of a short message. However, the limitation of the number of characters varies depending on a carrier or a device
25 model. Accordingly, one message may be transmitted if the

number of characters is within the limitation of the number of characters, or three or more messages may be transmitted.

[0033]

5 The portable terminal device 300 accepts an instruction of a URL included in the short message (Step S603). Then, a request including the URL is transmitted to the management server 100, and the management server 100 generates a web page and transmits the generated web page
10 to the portable terminal device 300. The portable terminal device 300 receives the web page corresponding to the request from the management server 100 (Step S604). The portable terminal device 300 displays the web page on the display unit (Step S605). Fig. 7(b) is an example of a web
15 page screen. In the example of Fig. 7(b), a chat-type web page in which a distinction between a company and a user is expressed by a direction of a balloon containing the message is displayed. In addition to putting the message in the balloon as described above, any form may be used as
20 long as message exchange between the user and the company can be understood.

[0034]

 In the example of the web page screen, a company logo mark 73, a phone icon 74 for calling a phone number of
25 the company, a message 75 transmitted from the company, the

message 75 having been transmitted through the short message as well, and a message input region 76 are displayed. Further, the web page transmitted first to the portable terminal device 300 may be a web page that does not include the message that has been transmitted through the short message. In this case, in the example of Fig. 7(b), the company logo mark 73, the phone icon 74, and the message input region 76 are displayed.

[0035]

10 The portable terminal device 300 determines whether or not an input of a message is accepted in the web page (Step S606). More specifically, it is determined whether or not a message is input in the message input region 76 in Fig. 7(b) and a send button is operated. In a case where
15 it is determined that the input of the message is accepted (Step S606: Yes), the input message is transmitted to the management server 100 (Step S607). The portable terminal device 300 receives a web page including the input message from the management server 100 (Step S608). The portable
20 terminal device 300 displays the web page on the display unit (Step S609). Fig. 7(c) is an example of a web page screen including a message 77 input by the user. In a case where it is determined that the input of the message is not accepted (Step S606: No), for example, in a case where it
25 is determined that the input of the message is not accepted

within a predetermined time, the processing ends.

Alternatively, the processing may end when a termination instruction is accepted.

[0036]

5 As described above, messages exchanged between the company and the user can be displayed on a web page by operating a URL included in a short message, and the user can input a message in the web page and transmit the message to the company without specifying a phone number of
10 the company or the like. Unlike messages transmitted by using the SMS, a message to be input does not have a limitation of the number of characters, and thus exchange of various information can be performed without concerns about the number of characters or the amount of data.
15 Further, the SMS is not used for transmission of a message from the user, and thus there is no cost for the SMS.

[0037]

 In addition to transmission and reception of messages, the user can directly and immediately call the
20 company by operating the phone icon 74 for calling the phone number of the company displayed on the web page of Fig. 7(b). As the company logo mark 73 is displayed on the web page, it is possible to discriminate the web page from a short message or a web page transmitted from a fraudulent
25 company, such that credibility of the message transmitted

from the company can be improved.

[0038]

Next, web page generation processing performed by the management server 100 of the message communication system 10 will be described. Fig. 8 is a flowchart illustrating a web page generation processing procedure performed by the management server 100.

[0039]

The transmission/reception unit 101 receives a request including a URL transmitted from the information terminal device 200 or the portable terminal device 300 (Step S801). Note that a date and time when the request is received is stored in a date and time of last browsing of the user or the company in the management information storage unit 110. Further, if there is a message associated with the chat ID in the message storage unit 120, "browsed" is stored in a browsing column of the message. The web page generation unit 103 converts the URL into a web page generation program (Step S802). More specifically, the URL is redirected to the web page generation program. For example, "http://kyuchat.jp/ABCDE" is redirected to "http://192.168.55.10/getchat.php?id=ABCDE&origin=USER", and "id = ABCDE" is converted into an actual chat ID. The web page generation unit 103 generates a web page by using

the web page generation program (Step S803). More specifically, the message associated with the chat ID and a distinction between the user and the company are obtained from the message storage unit 120, and the web page generation unit 103 generates a web page according to the distinction between the user and the company as a display target indicated by "origin". The transmission/reception unit 101 transmits the web page to the information terminal device 200 or the portable terminal device 300 that has transmitted the request (Step S804).

[0040]

The transmission/reception unit 101 determines whether or not a message is received from the web page displayed on the information terminal device 200 or the portable terminal device 300 (Step S805). In a case where it is determined that the message is received (Step S805: Yes), the transmission/reception unit 101 stores the message received from the web page in the message storage unit 120 (Step S806). More specifically, the transmission/reception unit 101 stores a newly numbered message ID, the chat ID, the message, the distinction between the user and the company as a sender of the message, and a date and time of reception of the message in association with one another, in the message storage unit 120. Further, the date and time of reception of the

message is stored in the date and time of reception of the latest message of the user or the company in the management information storage unit 110. The distinction between the user and the company may be determined based on the URL transmitted from the information terminal device 200 or the portable terminal device 300, or may be determined by including the distinction between the user and the company in the message when transmitting the message. The web page generation unit 103 generates a web page by using the web page generation program (Step S807). The transmission/reception unit 101 transmits the web page to the information terminal device 200 or the portable terminal device 300 that has transmitted the message (Step S808). In a case where it is determined that no message is received (Step S805: No), the processing ends.

[0041]

The mail generation unit 105 determines whether or not the sender is the user (Step S809). In a case where it is determined that the sender is the user (Step S809: Yes), the mail generation unit 105 generates a mail indicating that the message of the user is received and including a URL for the company (Step S810). The transmission/reception unit 101 transmits the mail to a mail address of the company (Step S811). Note that the mail address is obtained from a storage unit (not

illustrated) that stores the company ID and the mail address in association with each other. Further, "done" is stored in a notification column of the corresponding message in the message storage unit 120. Then, the
5 processing proceeds to Step S801. Note that Steps S810 and S811 may be selectively performed when the company desires.
[0042]

In a case where it is determined that the sender is not the user, that is, in a case where it is determined
10 that the sender is the company (Step S809: No), the short message generation unit 104 generates a short message indicating that the message of the company is received and including a URL for the user (Step S812). The transmission/reception unit 101 transmits the short message
15 to the user phone number a destination (Step S813). Further, "done" is stored in a notification column of the corresponding message in the message storage unit 120. Then, the processing proceeds to Step S801.
[0043]

20 As described above, when the management server 100 receives a request including a URL from any one of the information terminal device 200 and the portable terminal device 300, the management server 100 can generate and transmit a web page including messages exchanged between
25 the company and the user and the message input region to

display the web page on the display unit of the information terminal device 200 or the portable terminal device 300.

Since a web page is generated each time a request including a URL is received from the information terminal device 200

5 or the portable terminal device 300, there is no need to prepare a region for storing the web page, and a capacity of the storage region can be reduced.

[0044]

In addition, since an input message accepted by the
10 information terminal device 200 or the portable terminal device 300 is centrally managed by the message storage unit 120 of the management server 100, and a web page including all messages of the company and the user stored in the message storage unit 120 each time a request including a
15 URL or a message is input is generated and transmitted, the company and the user can check messages exchanged therebetween and transmit a message to each other without installing a special program in the information terminal device 200 or the portable terminal device 300.

20 [0045]

In the above-described embodiment,
"http://kyuchat.jp/ABCDE" has been described as the URL for the user. As for the URL for the company, the URL for the company is determined by changing a domain name or a path
25 of the URL for the user. For example, when the management

server 100 receives "http://admin.kyuchat.jp/Z5DF8", first,
"http://admin.kyuchat.jp/Z5DF8" can be converted into
"http://192.168.55.10/getchat.php?id=Z5DF8&origin=COMPANY"
to determine that the URL is a URL for the company, and "id
5 = Z5DF8" can be converted into an actual chat ID to
generate a web page based on information thereon.

[0046]

In a case where the web page generated by the web
page generation unit 103 has, for example, a format in
10 which a message is put in a balloon, a direction of a
balloon in a web page for the user and a direction of a
balloon in a web page for the company are opposite to each
other. Note that in a case where the distinction between
the user and the company and the message are simply
15 displayed in a time series manner, that is, in a case where
a message for the user and a message for the company are
displayed in the same manner, one web page may be used for
each combination of a user and a company without separately
generating a web page for the user and a web page for the
20 company.

[0047]

Next, web page display processing performed by the
information terminal device 200 of the message
communication system 10 will be described. Fig. 9 is a
25 flowchart illustrating a web page display processing

procedure performed by the information terminal device 200.

[0048]

The information terminal device 200 receives a mail from the management server 100 (Step S901). The

5 information terminal device 200 displays the mail on the display unit (Step S902). The information terminal device 200 receives an instruction of a URL included in the mail (Step S903). Thereby, a request including the URL is transmitted to the management server 100. The information

10 terminal device 200 receives a web page corresponding to the URL from the management server 100 (Step S904). The information terminal device 200 displays the web page on the display unit (Step S905). Fig. 10 is an explanatory diagram illustrating an example of a web page screen

15 displayed on the display unit of the information terminal device 200. Fig. 10(a) is a web page displaying message exchange with a user phone number "090-1112-****", and Fig. 10(b) is a web page in which a user phone number from which a short message is transmitted can be selected. Here, one

20 of the web pages is displayed. For example, in a case where the information terminal device 200 is a smartphone, it is possible to transmit a message from the company to the user as a reply in a timely manner by displaying Fig. 10(a) on a screen of the smartphone. When Fig. 10(b) is

25 displayed, a request including a URL corresponding to the

user phone number is transmitted to the management server 100 each time a new user phone number of a user is specified, and the processing illustrated in Fig. 8 is performed.

5 [0049]

The information terminal device 200 determines whether or not an input of a message is accepted in the web page (Step S906). In a case where it is determined that the input of the message is accepted (Step S906: Yes), the
10 information terminal device 200 transmits the message to the management server 100 (Step S907). Thereby, the management server 100 receives the message, and generates and transmits a web page including the message. The information terminal device 200 receives the web page from
15 the management server 100 (Step S908). The information terminal device 200 displays the web page on the display unit (Step S909). In a case where it is determined that the input of the message is not accepted (Step S906: No), for example, in a case where it is determined that the
20 input of the message is not accepted within a predetermined time, the processing ends. Alternatively, the processing may end when a termination instruction is accepted.

[0050]

As described above, an input message accepted by the
25 information terminal device 200 operated by the company is

also stored in the message storage unit 120 of the management server 100, and the information terminal device 200 can display the input message and message exchange between the user and the company on a web page without performing any processing or retaining any data. In addition, once a short message is transmitted to the user, a message can be input in the web page, and thus characters, materials, still images, moving images, and the like can be freely transmitted and received without a limitation of the number of characters, and the like.

[0051]

Next, message management processing performed by the management server 100 and the information terminal device 200 of the message communication system 10 will be described. Fig. 11 is a flowchart illustrating a message management processing procedure performed by the management server 100 and the information terminal device 200.

[0052]

The information terminal device 200 accepts an instruction to display a management web page (Step S1101). The information terminal device 200 transmits the instruction to display a management web page to the management server 100 (Step S1102).

[0053]

The transmission/reception unit 101 of the

management server 100 receives the instruction to display a management web page from the information terminal device 200 (Step S1103). The web page generation unit 103 generates a management web page (Step S1104). More specifically, the web page generation unit 103 generates a management web page for managing messages transmitted from users based on a user phone number stored in the management information storage unit 110, a date and time of reception of the latest message of a user, a date and time of reception of the latest message of a company, a date and time of last browsing of the company and the URL.

[0054]

Fig. 12 is an explanatory diagram illustrating an example of a management web page screen displayed on the display unit of the information terminal device 200. A display screen 21 displays a message management table for each company. In the message management table, an icon 22 indicating whether or not the company has browsed or unbrowsed a message transmitted from the user, a user phone number 23, a date and time 24 of the latest message transmitted from the user, and a DETAIL button 25 are displayed. As for the icon 22 indicating whether or not the company has browsed or unbrowsed a message transmitted from the user, when a date and time of reception of the latest message of a user corresponding to the user phone

number is later than or almost simultaneous with a date and time of last browsing of the company, it is determined the message is "unbrowsed", and when the date and time of reception of the latest message of the user is earlier than
5 the date and time of last browsing of the company, it is determined the message is "browsed". Further, a URL for the company associated with the user phone number is embedded in the DETAIL button displayed in a details column of the message management table. In the message management
10 table, the dates and times of reception of the latest message of the user are sorted from either latest to earliest, or earliest to latest according to setting. Alternatively, only information on a user phone number from which a message of the user is received may be displayed,
15 or only information on a user phone number of which a date and time of last browsing of the user is not stored according to the setting may be displayed. In addition, a date and time of last browsing of the user, a date and time of reception of the latest message of the company, and a
20 date and time of last browsing may be further added to the message management table. The transmission/reception unit
101 transmits the management web page to the information terminal device 200 (Step S1105).

[0055]

25 The information terminal device 200 receives the

management web page from the management server 100 (Step S1106). The information terminal device 200 displays the management web page on the display unit (Step S1107). The information terminal device 200 receives an instruction to
5 display details of the message through the DETAIL button of each user (Step S1108). The information terminal device 200 transmits a request including the URL embedded in the DETAIL button to the management server 100 (Step S1109).
[0056]

10 The transmission/reception unit 101 of the management server 100 receives the request including the URL from the information terminal device 200 (Step S1110). The web page generation unit 103 generates a web page by using a web page generation program redirected from the URL
15 (Step S1111). The transmission/reception unit 101 transmits the web page to the information terminal device 200 (Step S1112).
[0057]

 The information terminal device 200 receives the web
20 page from the management server 100 (Step S1113). The information terminal device 200 displays the web page on the display unit (Step S1114). An example of the web page screen is illustrated in Fig. 10(a) or Fig. 10(b). Note that after Step S1114, the processing after Step S906 in
25 Fig. 9 is performed. Thereby, the input of the message can

be accepted.

[0058]

As described above, as the management web page is displayed on the information terminal device 200 operated
5 by the company, a response status of the user to which the short message is transmitted or a handling status of the company can be managed collectively. Further, it is possible to confirm details of the message transmitted and received to and from each user, and it is possible to
10 efficiently perform handling including transmission of the message for each user.

[0059]

As another embodiment, processing in which a message is selected by a BOT that performs a predetermined
15 operation in the management server 100 and a web page including the selected message is transmitted to the portable terminal device 300, instead of transmitting an input message accepted in the information terminal device 200 operated by the company to the portable terminal device
20 300, will be described.

[0060]

Specifically, in the processing of Step S501 in Fig. 5, the transmission/reception unit 101 receives, from the information terminal device 200, a user phone number as a
25 destination and a template ID which is information for

identifying a BOT. Further, before Step S505, the transmission/reception unit 101 obtains a bot message associated with the template ID from the bot message storage unit 130. The processing after Step S505 is
5 performed with the bot message, instead of the message.
[0061]

Further, in the processing of Fig. 8, in a case where it is determined in Step S809 that the sender is the user (Step S809: Yes), the processing of transmitting a
10 mail to the information terminal device 200 is not performed, and a bot message corresponding to the message input by the user is obtained from the bot message storage unit 130 and stored in the message storage unit 120.
Further, the web page generation unit 103 generates a web
15 page and transmits the web page to the portable terminal device 300. Further, the processing proceeds to Step S805.
In a case where it is determined in Step S809 that the sender is not the user (Step S809: No), the processing proceeds to Step S805.

20 [0062]

As described above, as the message selected by the BOT is transmitted to the user, the company can automatically respond to the user through the web page while increasing a rate of arrival of the message to the
25 user by using the SMS, and thus, it is possible to

efficiently respond to the user.

[0063]

As another embodiment, when a message of the information terminal device 200 operated by the company is a message related to payment for goods or services, a URL of a payment processing web page may be added to a message to be transmitted from the company and displayed on the web page. Further, the URL of the payment processing web page may be added to the bot message. Note that a payment processing web page generated by requesting to a payment server (not illustrated) may be used as the payment processing web page.

[0064]

As a result, as the message is first transmitted from the company to the user by using the SMS, a rate of arrival of the message to the user can be increased by using the SMS and the payment processing web page can be displayed during message exchange between the user and the company on a web page, such that it is possible to improve credibility of the user for the payment processing. Meanwhile, also for the company, since the payment processing can be completed only by exchanging messages online, it is possible to more efficiently perform the payment processing.

[0065]

In the above-described embodiment, the processing of transmitting a short message by using the SMS has been described. However, in addition to the SMS, a multimedia messaging service (MMS), a rich communication service (RCS), or other services, in which a destination is a phone number, similarly to the SMS, may be used.

[0066]

Specific application examples of the above-described embodiment include a use in various situations such as provision of information on employment, job change, dispatch, part-time job, or the like, provision of information on housing, rental properties, used cars, or the like, purchase of financial products such as stocks and articles and provision of information on financial products such as stocks and articles, and auction of goods.

[0067]

Next, opt-out processing will be described. Fig. 13 is an explanatory diagram illustrating an example of an opt-out screen displayed on the display unit of the portable terminal device 300. Fig. 13(a) is an example of a screen displaying an opt-out method. As a specific opt-out method, for example, "If you want to stop message distribution, please input "stop distribution"." 31 is displayed. Fig. 13(b) is an example of a screen when opt-out is completed according to an opt-out instruction from

the user. When distribution of a short message from the company to a user phone number is stopped, as a method of canceling the opt-out, for example, "If you want to resume message distribution, please input "resume distribution"."

5 32 is displayed on the bottom of the screen. Fig. 13(c) is an example of a screen when the cancellation of the opt-out is completed according to an instruction of the user to cancel the opt-out, as a method of opting out again, "If you want to stop message distribution, please input "stop distribution"." 33 is displayed on the bottom of the
10 screen.

[0068]

Meanwhile, the management server 100 includes an opted-out phone number storage unit (not illustrated) which
15 stores an opted-out user phone number, and when an input of "stop distribution" is accepted in the web page displayed on the portable terminal device 300, the user phone number is stored in the opted-out phone number storage unit.

Further, when an input of "resume distribution" is accepted
20 in a web page, a user phone number corresponding to the web page is deleted from the opted-out phone number storage unit. At the time of transmitting a short message, the opted-out phone number storage unit is searched and in a case where the user phone number is stored in the opted-out
25 phone number storage unit, the short message is not

transmitted.

[0069]

At the time of performing the opt-out, in a case where it is determined that the user phone number is not
5 stored in the opted-out phone number storage unit, the web page generation unit 103 generates a web page to which the opt-out method is added, and in a case where it is determined that the user phone number is stored in the opted-out phone number storage unit, the web page
10 generation unit 103 generates a web page to which a method of canceling the opt-out is added.

[0070]

Further, in a case where the user phone number is stored in the opted-out phone number storage unit, (x) may
15 be added in a column of the date and time of reception of the latest message for the opted-out user phone number in the message management table illustrated in Fig. 12 (26). Further, the DETAIL button 27 is displayed, and if the DETAIL button 27 is operated, message exchange up to now is
20 displayed. However, the message input region is not displayed, such that transmission of a message from the company is disabled.

[0071]

Note that the short message described above is
25 transmitted to the portable terminal device 300 as a

destination from a short message server of a carrier
corresponding to the destination via an intermediate server
including a home location register (HLR) used to determine
a carrier of a user phone number by using a communication
5 protocol such as short message peer-to-peer (SMPP), the
simple mail transfer protocol (SMTP), or HTTP.

[0072]

In addition, in a case where the portable terminal
device 300, which is the destination of the short message,
10 does not have a physical mobile communication network in-
house but uses a mobile virtual network operator (MVNO)
which provides communication services by borrowing from
another company, the above-described processing can be
performed.

15 [0073]

A hardware configuration of the management server
100, the information terminal device 200, and the portable
terminal device 300 according to the above-described
embodiment is a normal computer including a central
20 processing unit (CPU), a read only memory (ROM), a random
access memory (RAM), an external storage device such as a
hard disk drive (HDD), a communication control device, and
the like. The CPU reads and operates a program stored in
the ROM, the RAM, the HDD, or the like, thereby
25 implementing the above-described configuration and

functions.

[0074]

The program operated on the management server 100, the information terminal device 200, and the portable
5 terminal device 300 is stored in a computer connected to the network N such as the Internet, and may be provided by being downloaded via the network N, or may be provided by being recorded in a computer-readable recording medium such as a CD-ROM, a DVD, a USB memory, or an SD card as a file
10 in an installable or executable format. Further, a program that implements the above-described functions or processing may be provided in a usage form such as an application programming interface (API), software as a service (SaaS), or cloud computing.

15 [0075]

Note that the present invention is not limited to the above-described embodiments, and does not necessarily need to be physically configured as illustrated. In addition, the present invention can be configured with all
20 or part of the components described in the embodiments functionally or physically divided, integrated, replaced, deformed or deleted in an arbitrary unit depending on various loads and use situation.

25

Reference Signs List

[0076]

	N	Network
	10	Message communication system
5	100	Management server
	101	Transmission/reception unit
	102	URL generation unit
	103	Web page generation unit
	104	Short message generation unit
10	105	Mail generation unit
	110	Management information storage unit
	120	Message storage unit
	130	Bot message storage unit
	200	Information terminal device
15	300	Portable terminal device

CLAIMS

1. A management server connected to an information
terminal device operated by a company via a network, the
5 management server comprising:

reception means which receives, from the information
terminal device, a company ID for identifying the company,
a user phone number that is a phone number of a portable
terminal device operated by a user, and a message to be
10 transmitted to the user in association with one another;

uniform resource locator (URL) generation means
which generates a URL for instructing generation of a web
page including a message input region for each chat ID
indicating a combination of the company ID and the user
15 phone number;

short message generation means which generates a
short message including the message received from the
information terminal device and the URL generated by the
URL generation means; and

20 transmission means which transmits the short message
generated by the short message generation means to the user
phone number as a destination.

2. The management server according to claim 1, further comprising:

message storage means which stores the chat ID, a message input by the company or the user, and a distinction
5 between the company and the user as a sender of the message, in association with one another; and

web page generation means which generates a web page based on the message associated with the chat ID and the distinction between the company and the user by using a web
10 page generation program redirected from the URL,

wherein the reception means receives a request including the URL from the information terminal device or the portable terminal device, and

the transmission means transmits the web page
15 generated by the web page generation means to the information terminal device or the portable terminal device that has transmitted the request.

3. The management server according to claim 2,

20 wherein the reception means receives the message from the information terminal device or the portable terminal device,

the web page generation means stores the message received by the reception means in association with the
25 chat ID, and the distinction between the company and the

user in the message storage means,

the web page generation means generates the web page based on the message associated with the chat ID and the distinction between the company and the user stored in the message storage means, and

the transmission means transmits the web page generated by the web page generation means to the information terminal device or the portable terminal device that has transmitted the message.

10

4. The management server according to claim 3, further comprising mail generation means which generates a mail indicating that an input of the message is accepted and including the URL in a case where it is determined that the sender of the message is the user,

15

wherein the transmission means transmits the mail generated by the mail generation means to a mail address of the company.

20 5. The management server according to claim 3,

wherein the short message generation means generates a short message indicating that an input of the message is accepted and including the URL in a case where it is determined that the sender of the message is the company,

25 and

the transmission means transmits the short message generated by the short message generation means to the user phone number as a destination.

5 6. The management server according to claim 3,
wherein the web page generation means stores a message selected by a BOT in the message storage means and generates a web page including the message in a case where it is determined that the sender of the message is the
10 user, and

the transmission means transmits the web page generated by the web page generation means to the portable terminal device.

15 7. The management server according to claim 3, wherein the message received from the information terminal device includes a URL of a payment web page.

8. The management server according to any one of claims
20 2 to 7, wherein the web page generation means generates the web page by adding an icon for calling a phone number of the company.

9. The management server according to any one of claims
2 to 8, wherein the web page generation means generates the
web page in which the message is displayed in a form in
which a direction of a balloon of the user is different
5 from that of the company.

10. The management server according to any one of claims
2 to 9, further comprising opted-out phone number storage
means which stores the user phone number instructed to be
10 opted-out by the user,

wherein the web page generation means generates a
web page to which an opt-out method is added in a case
where it is determined that the user phone number is not
stored in the opted-out phone number storage means, and
15 generates a web page to which a method for canceling opt-
out is added in a case where it is determined that the user
phone number is stored in the opted-out phone number
storage means.

20 11. The management server according to claim 10, further
comprising management information storage means which
stores the chat ID, the URL, the user phone number, and a
date and time of reception of the latest message in
association with one another,

25 wherein when accepting an instruction to display a

management screen from the information terminal device, the web page generation means generates a web page for the management screen including a table in which an indication of whether or not a message of which a sender is the user
5 is browsed or unbrowsed, the user phone number, the date and time of reception of the latest message, and a button associated with the URL are displayed in association with one another from the management information storage means and the message storage means,
10 in a case where it is determined that the user phone number is stored in the opted-out phone number storage means, the web page generation means generates the web page displaying the opt-out in association with the user phone number, and
15 the transmission means transmits the web page generated by the web page generation means to the information terminal device.

12. The management server according to any one of claims
20 1 to 11, wherein the transmission means transmits the short message by using one of a short message service (SMS), a multimedia messaging service (MMS), and a rich communication service (RCS).

25

13. A message communication method executed by a computer connected to an information terminal device operated by a company via a network, the message communication method comprising:

5 a receiving step of receiving, from the information terminal device, a company ID for identifying the company, a user phone number that is a phone number of a portable terminal device operated by a user, and a message to be transmitted to the user in association with one another;

10 a URL generating step of generating a URL for instructing generation of a web page including a message input region for each chat ID indicating a combination of the company ID and the user phone number;

a short message generating step of generating a
15 short message including the message received from the information terminal device and the URL generated in the URL generating step; and

a transmitting step of transmitting the short message generated in the short message generating step to
20 the user phone number as a destination.

14. A message communication program causing a computer connected to an information terminal device operated by a company via a network to perform:

a receiving step of receiving, from the information
5 terminal device, a company ID for identifying the company, a user phone number that is a phone number of a portable terminal device operated by a user, and a message to be transmitted to the user in association with one another;

a URL generating step of generating a URL for
10 instructing generation of a web page including a message input region for each chat ID indicating a combination of the company ID and the user phone number;

a short message generating step of generating a short message including the message received from the
15 information terminal device and the URL generated in the URL generating step; and

a transmitting step of transmitting the short message generated in the short message generating step to the user phone number as a destination.

20