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(54) SYSTEM AND METHOD OF SHARING CONTENTS USING MESSENGER

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(57) **ABSTRACT**

The present invention provides to a system and method of sharing contents using a messenger program, The system includes a device server which registers Consumer electronic (CE) devices of the same user and CE devices of different users, and generates a messenger account; a messenger server which registers the generated messenger account; and a buddy setting module which sets a buddy relationship among the CE devices of the same user and a buddy relationship among the CE devices of different users, such that contents are shared by the CE devices having the buddy relationship.

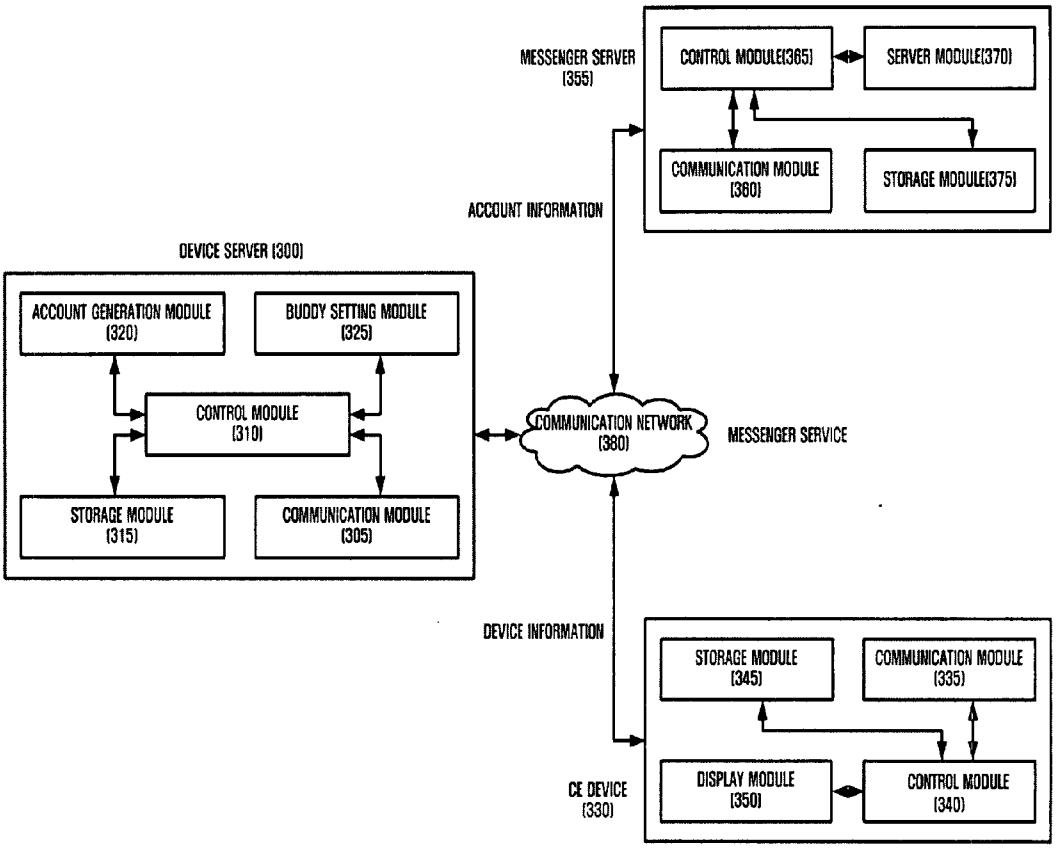


FIG. 1(Related Art)

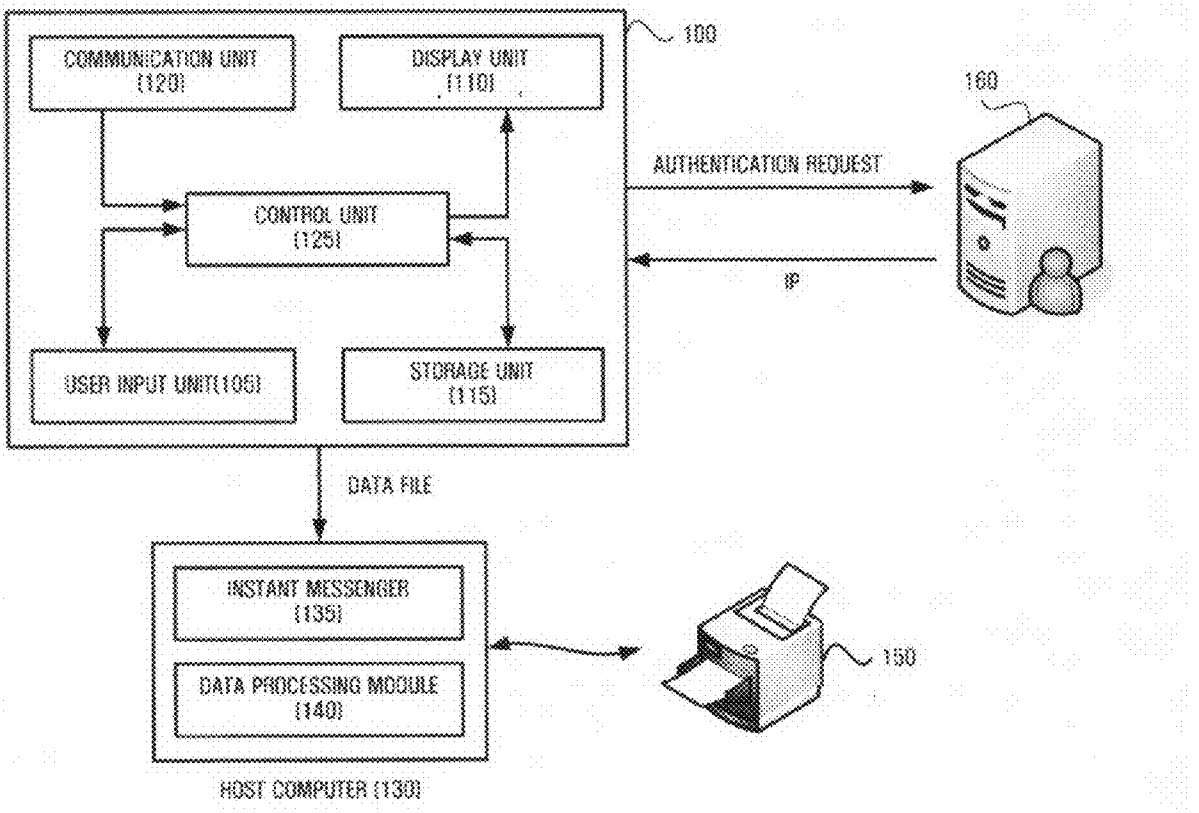


FIG. 2(Related Art)

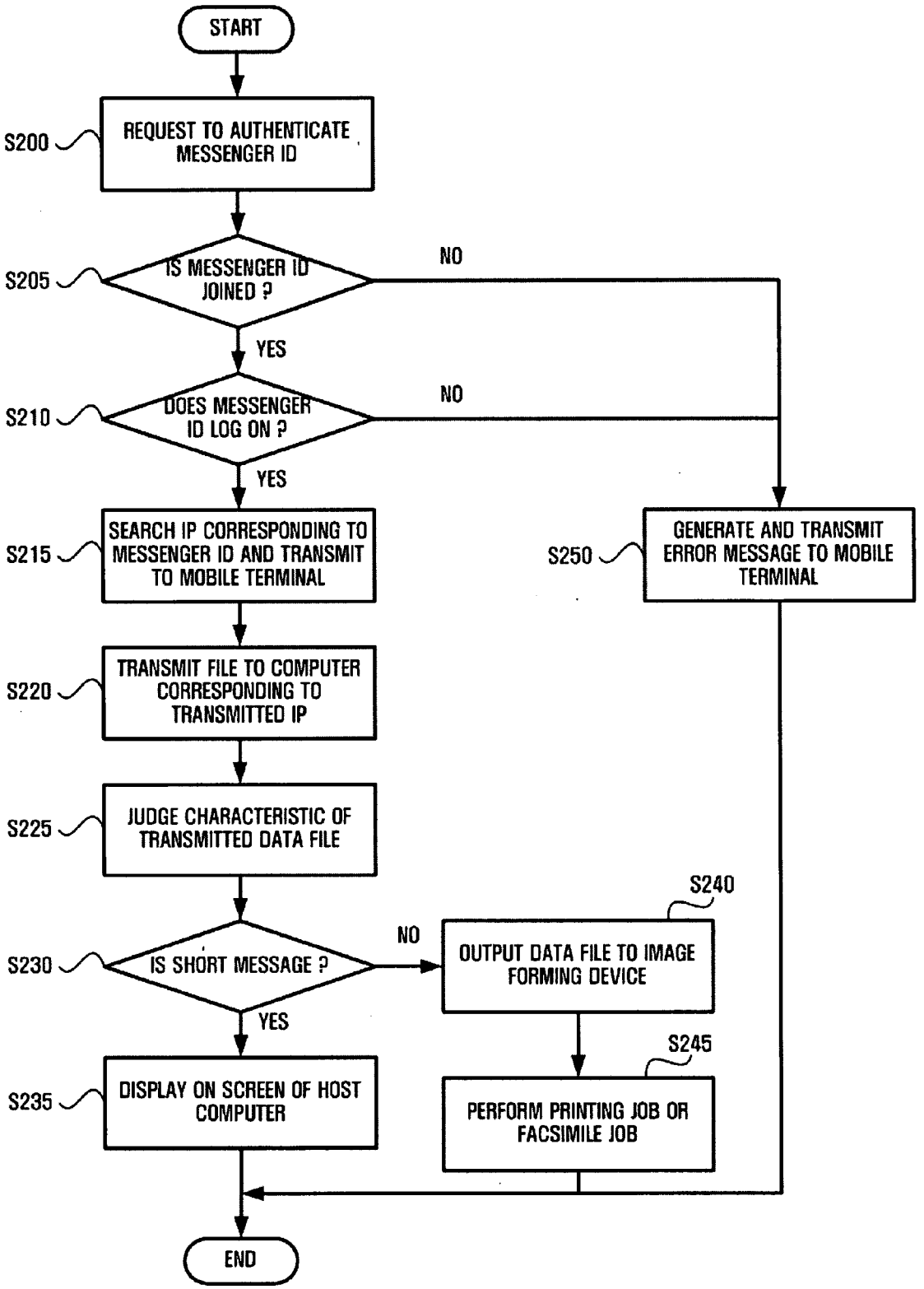


FIG. 3

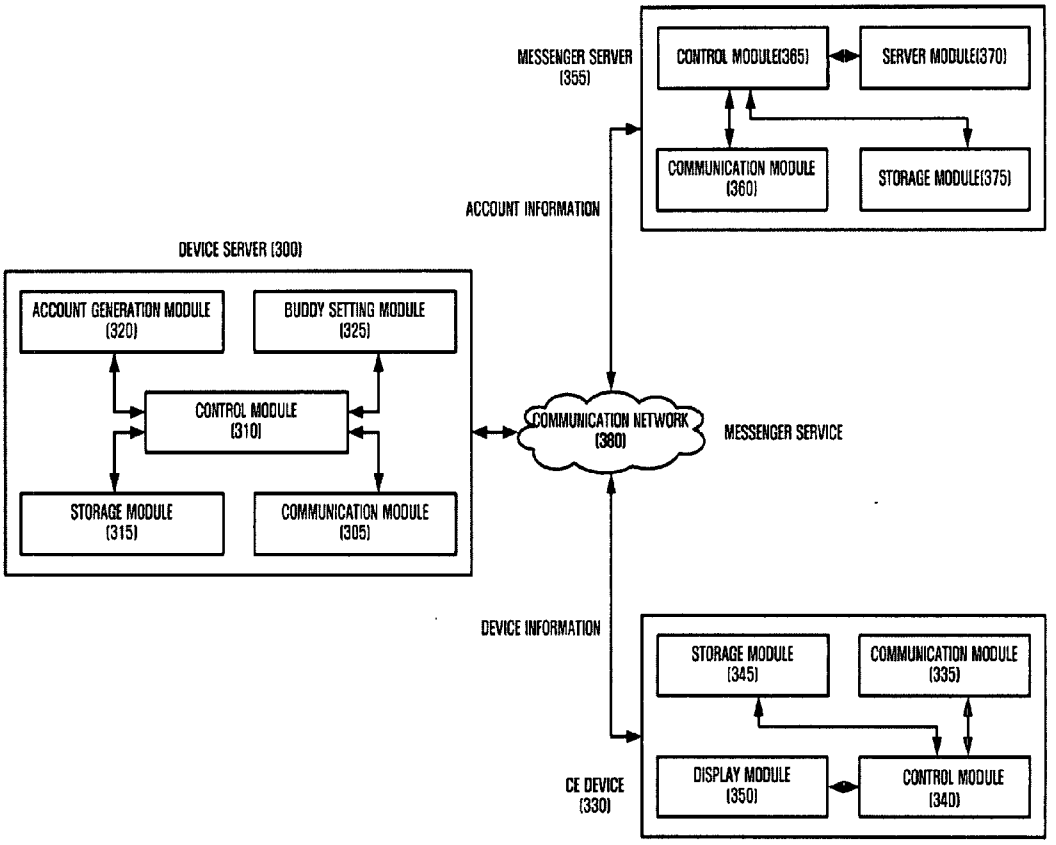

MESSENGER SERVER (355)
CONTROL MODULE(365)
SERVER MODULE(370)
COMMUNICATION MODULE (360)
STORAGE MODULE(375)
ACCOUNT INFORMATION
DEVICE SERVER (300)
ACCOUNT GENERATION MODULE (320)
BUDDY SETTING MODULE (325)
CONTROL MODULE (310)
STORAGE MODULE (315)
COMMUNICATION MODULE (305)
COMMUNICATION NETWORK (380)
MESSENGER SERVICE
DEVICE INFORMATION
STORAGE MODULE (345)
COMMUNICATION MODULE (335)
DISPLAY MODULE (350)
CONTROL MODULE (340)
CE DEVICE (330)

FIG. 4

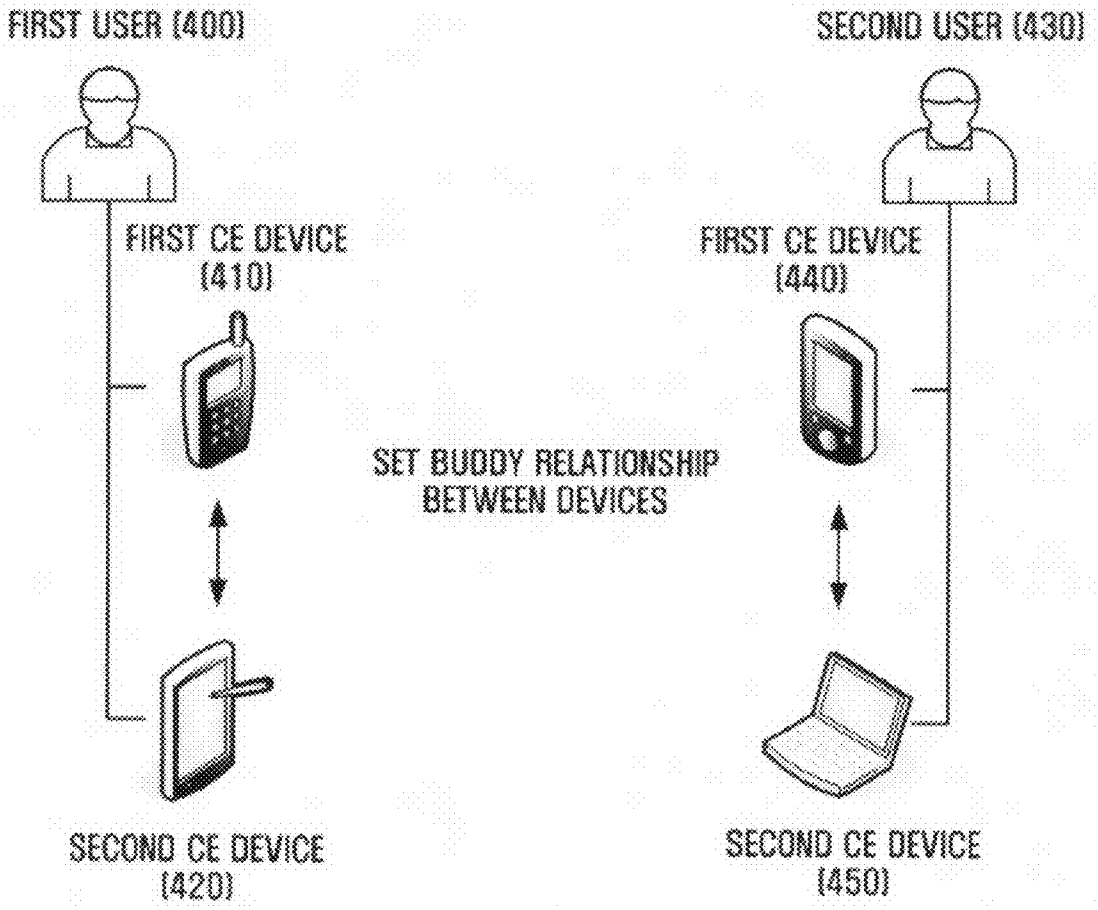

FIRST USER (400)
SECOND USER (430)
FIRST CE DEVICE (410)
FIRST CE DEVICE (440)
SET BUDDY RELATIONSHIP BETWEEN DEVICES
SECOND CE DEVICE (420)
SECOND CE DEVICE (450)

FIG. 5

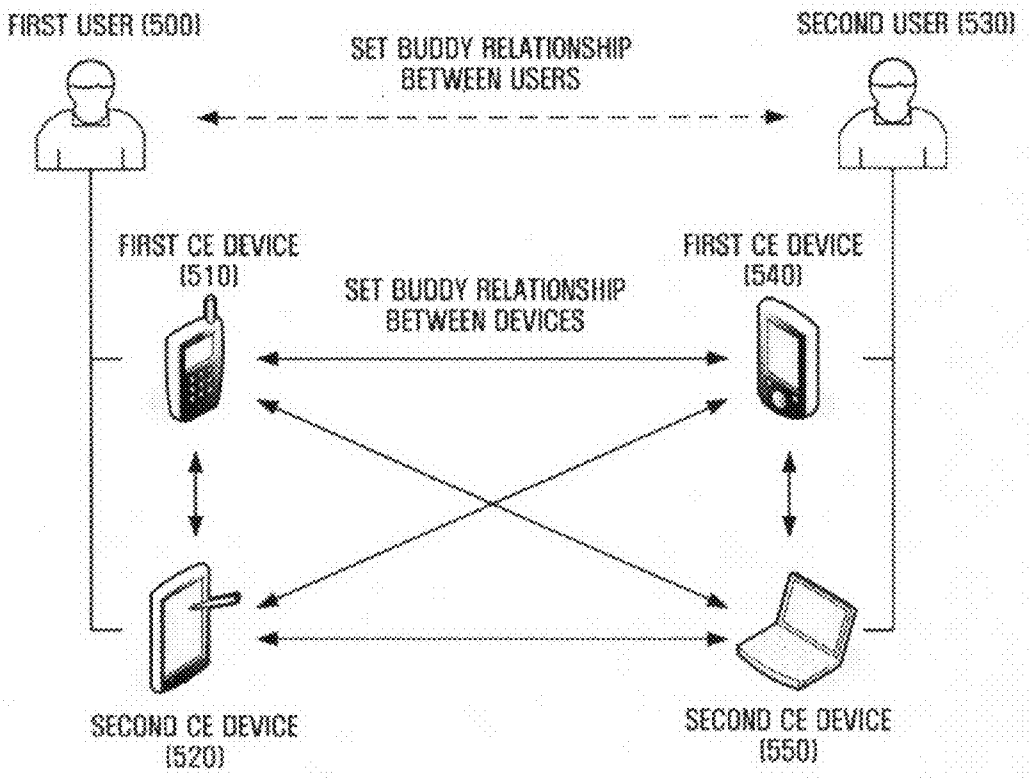

FIRST USER (500)
SET BUDDY RELATIONSHIP BETWEEN USERS
SECOND USER (530)
FIRST CE DEVICE (510)
SET BUDDY RELATIONSHIP BETWEEN DEVICES
FIRST CE DEVICE (540)
SECOND CE DEVICE (520)
SECOND CE DEVICE (550)

FIG. 6

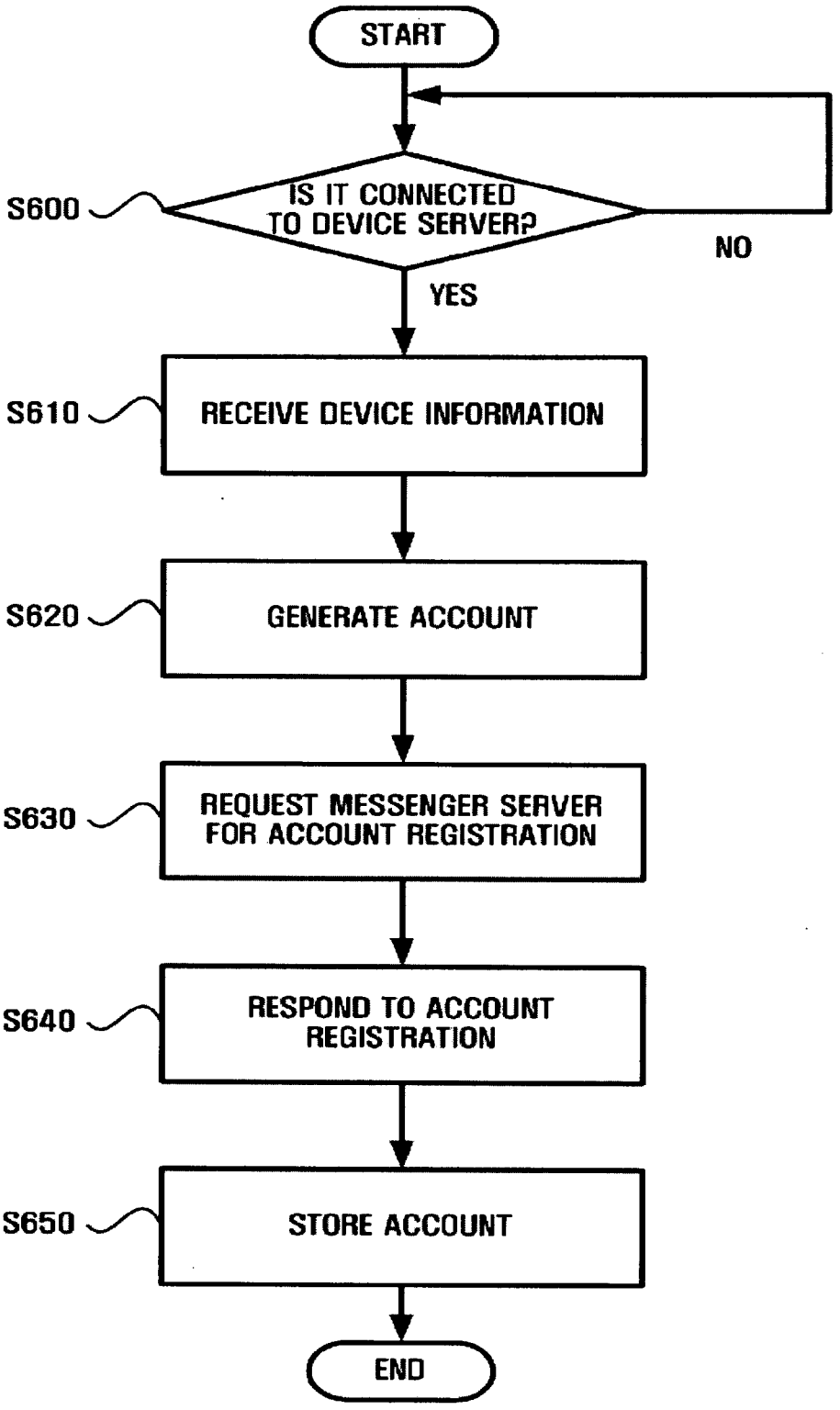

START
S600
IS IT CONNECTED TO DEVICE SERVER?
NO
YES
S610
RECEIVE DEVICE INFORMATION
S620
GENERATE ACCOUNT
S630
REQUEST MESSENGER SERVER FOR ACCOUNT REGISTRATION
S640
RESPOND TO ACCOUNT REGISTRATION
S650
STORE ACCOUNT
END

FIG. 7

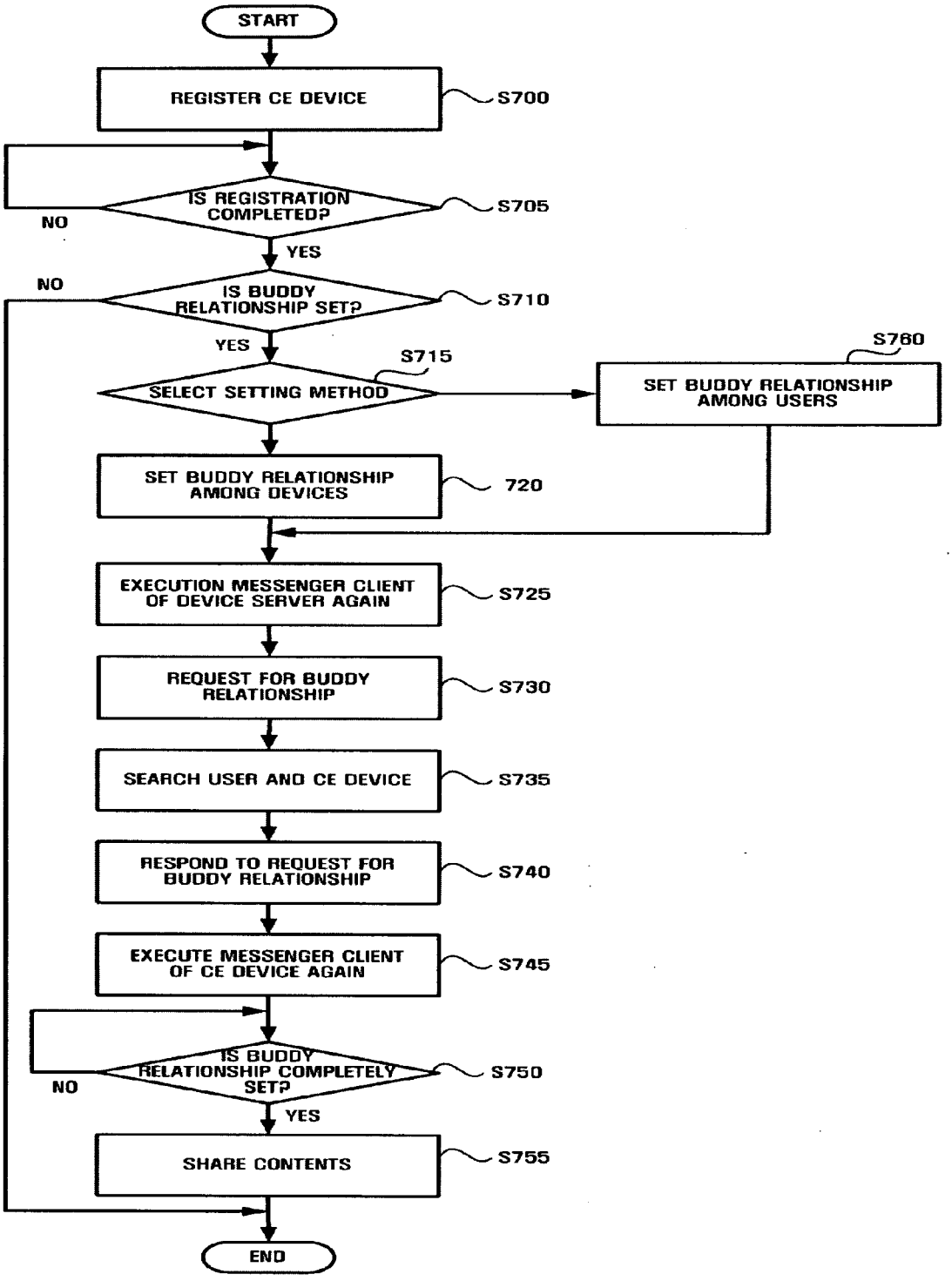
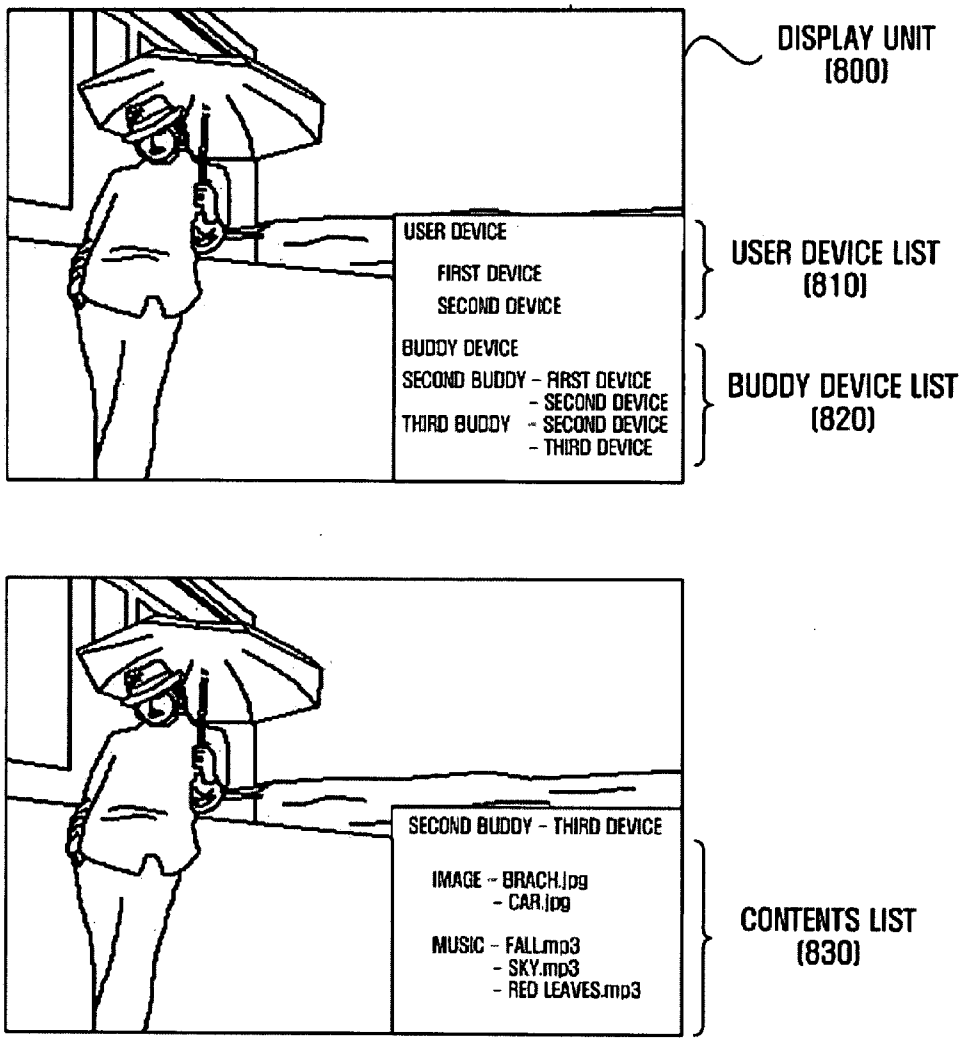

START
REGISTER CE DEVICE
S700
IS REGISTRATION COMPLETED?
S705
NO
YES
IS BUDDY RELATIONSHIP SET?
S710
NO
YES
S715
SELECT SETTING METHOD
S760
SET BUDDY RELATIONSHIP AMONG USERS
SET BUDDY RELATIONSHIP AMONG DEVICES
720
EXECUTION MESSENGER CLIENT OF DEVICE SERVER AGAIN
S725
REQUEST FOR BUDDY RELATIONSHIP
S730
SEARCH USER AND CE DEVICE
S735
RESPOND TO REQUEST FOR BUDDY RELATIONSHIP
S740
EXECUTE MESSENGER CLIENT OF CE DEVICE AGAIN
S745
IS BUDDY RELATIONSHIP COMPLETELY SET?
S750
NO
YES
SHARE CONTENTS
S755
END

FIG. 8


DISPLAY UNIT
(800)
USER DEVICE
FIRST DEVICE
SECOND DEVICE
USER DEVICE LIST
(810)
BUDDY DEVICE
SECOND BUDDY - FIRST DEVICE
- SECOND DEVICE
THIRD BUDDY - SECOND DEVICE
- THIRD DEVICE
BUDDY DEVICE LIST
(820)
SECOND BUDDY - THIRD DEVICE
IMAGE - BRACH.jpg
- CAR.jpg
MUSIC - FALL.mp3
- SKY.mp3
- RED LEAVES.mp3
CONTENTS LIST
(830)

SYSTEM AND METHOD OF SHARING CONTENTS USING MESSENGER

CROSS REFERENCE TO RELATED APPLICATION

[0001] This application claims priority from Korean Patent Application No. 10-2006-103623 filed on Oct. 24, 2006 in the Korean Intellectual Property Office, the disclosure of which is incorporated herein by reference in its entirety.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] Apparatuses and methods consistent with the present invention relate to a system and method of sharing contents using a messenger program, and more particularly, to a system and method of sharing contents using a messenger program that registers CE devices of the same user or CE devices of different users in a device server so as to register messenger accounts to be generated by the device server and sets a buddy relationship among the CE devices of the same user and a buddy relationship among the CE devices of different users so as to share contents among the CE devices having the buddy relationship.

[0004] 2. Description of the Related Art

[0005] A messenger program is software, that allows messages and data to be exchanged among a plurality of users through the Internet in real time. The messenger program is generally referred to as an instant messenger program because it can instantly transmit messages and data. The user can check if other users have accessed the Internet through the messenger program and respond to the other users instantly.

[0006] Further, the messenger program has a faster response speed than general e-mail and permits the user to exchange messages while performing other jobs. The messenger program supports multi-user chatting, voice chatting, and the like, and thus, a large volume of motion picture files, text messages, and the like can be transmitted to a cellular phone through the messenger program. Further, news, stocks, music information, and the like are provided by the messenger program.

[0007] FIG. **1** is a diagram showing a data transmission system that uses a messenger service according to the related art.

[0008] The data transmission system that uses the messenger service according to the related art includes a mobile terminal **100**, a host computer **130**, an image forming device **150**, and a messenger server **160**.

[0009] The mobile terminal **100**, the messenger server **160**, and the host computer **130** perform a messenger service through a mobile communication network (not shown) and an Internet network (not shown).

[0010] The mobile terminal **100**, such as a personal digital assistant (PDA), a cellular phone, a personal communication service (PCS), and the like, is a device that secures portability. The mobile terminal **100** can perform communication with external devices in a wired/wireless manner, stores a plurality of data files, and has a function of capturing a still picture or a motion picture using an internal camera. Further, the mobile terminal **100** has a Short Message Service (SMS) function and a function of transmitting the stored files to an external device, such as the host computer **130**. The stored data files may be, for example, still picture files, motion picture files, general document files, Portable Document Format (PDF) files, and the like.

[0011] The mobile terminal **100** has a function of transmitting a predetermined data file to the host computer **130** using a messenger service. In particular, when an instant messenger Identifier (ID) is input or selected to transmit a data file through a user interface, the mobile terminal **100** requests that the messenger server **160** authenticate the input ID.

[0012] Here, a messenger service, which is implemented by an instant messenger program **135**, provides bidirectional communication in which messages are exchanged in a real time manner when a user and another user are connected to Internet.

[0013] The user downloads the instant messenger program **135** from the messenger server **160** that is a service provider and installs the downloaded instant messenger program **135** in the host computer **130**. Then, in order to use the instant messenger program **135**, the user joins the messenger server **160**. That is, the user registers an ID, a password, and the like with the messenger server **160** for joining.

[0014] When the user tries to access the messenger server **160** using the instant messenger program **135** of the host computer **130**, the user logs on the messenger server **160** by inputting the ID and the password registered upon joining. At this time, the instant messenger program **135** checks a fixed Internet Protocol (IP) or a floating IP of the host computer **130** in which the user tries to log on the messenger program and informs the messenger server **160** of the checked fixed IP or floating IP. Then, the messenger server **160** stores, in a database, an IP that matches with the logon ID.

[0015] To this end, the mobile terminal **100** includes a user input unit **105**, a display unit **110**, a control unit **125**, a communication unit **120**, and a storage unit **115**.

[0016] The user input unit **105** is a user interface through which the user inputs an ID of the instant messenger program so as to transmit data files.

[0017] The display unit **110**, which is implemented by an LCD, displays the instant messenger ID input through the user input unit **105**. The storage unit **115** stores a plurality of data files.

[0018] The communication unit **120** transmits the ID input through the user input unit **105** to the messenger server **160**. Further, the communication unit **120** receives an IP matching with the ID transmitted from the messenger server **160**.

[0019] The control unit **125** transmits the ID input to the messenger server **160** through the user input unit **105** and controls the communication unit **120** so as to request the authentication of the ID and the search of the corresponding IP. Further, the control unit **125** controls the communication unit **120** to transmit the data files stored in the storage unit **115** to the host computer **130** corresponding to the IP searched and transmitted by the messenger server **160**.

[0020] Meanwhile, the messenger server **160** stores the IDs and passwords of the plurality of users who use the instant messenger program **135**. Further, the messenger server **160** also stores an IP of a computer that is used by the user whenever logon.

[0021] When the mobile terminal **100** requests the authentication of an ID, the messenger server **160** checks whether or not the requested ID is available. If the ID is available, the

messenger server **160** searches an IP matching with the requested ID and transmits the searched IP to the mobile terminal **100**.

[0022] The messenger server **160** checks whether or not the ID to be authenticated is joined in the messenger server **160**. If the ID is joined in the messenger server **160**, the messenger server **160** checks whether or not the ID to be authenticated is currently logged on. If it is checked that the ID is currently logged on, the messenger server **160** judges that the ID to be authenticated is an available ID and searches an IP of the host computer **130** that matches with the ID to be authenticated.

[0023] Then, the messenger server **160** encodes the searched IP for the authentication and transmits the encoded IP to the mobile terminal **100**. At this time, the IP is encoded according to a prescribed protocol between the mobile terminal **100** and the messenger server **160**. Further, the messenger server **160** may transmit the searched IP without encoding.

[0024] The mobile terminal **100** decodes the encoded IP transmitted from the messenger server **160**, performs the authentication, and transmits a desired data file to the host computer **130** corresponding to the transmitted IP. The data file to be transmitted can be selected before the mobile terminal **100** requests the messenger server **160** for the authentication of the ID or after the mobile terminal **100** receives the IP. Further, the data file to be transmitted includes various files, such as text files, image files, and the like.

[0025] The user logs on the messenger server **160** using the fixed IP or the floating IP through the host computer **130** that receives the data file transmitted from the mobile terminal **100** and performs a predetermined job.

[0026] To this end, the instant messenger program **135** and a data processing module **140** are installed in the host computer **130**.

[0027] The instant messenger program **135** is a program that provides the above-described instant messenger service. The user joins and logs on the messenger server **160** using the instant messenger program **135**.

[0028] Further, the data processing module **140** judges a characteristic of the data file transmitted from the mobile terminal **100** and performs a predetermined job on the basis of the judgment result. Specifically, if the transmitted data file has an extension "txt" and does not exceed a predetermined capacity, the data processing module **140** judges that the transmitted data file is a short message using an SMS (Short Message Service). Then, the data processing module **140** processes the message to be displayed on a screen of the host computer **130**.

[0029] Further, if the transmitted data file has an extension other than "txt", the data processing module **140** prints the transmitted data file or outputs the transmitted data file to an image forming device **150** to transmit to a facsimile or a receiver.

[0030] At this time, the data processing module **140** checks priorities given to a printing job and a facsimile job, such that the image forming device **150** performs a job having a higher priority. For example, if the printing job has a higher priority, the data processing module **140** outputs a command to print the transmitted data file to the image forming device **150** together with the transmitted data file. Then, the image forming device **150** performs the printing job relative to the data file. Here, the priorities given to the printing job and the facsimile job may be changed by the user.

[0031] The image forming device **150** is an office automation apparatus, such as a complex machine, a printer, or a facsimile, and forms an image of the data file output from the host computer **130**. The host computer **130** is communicatably connected to the image forming device **150** using a communication interface, such as a USB interface or the like.

[0032] FIG. **2** is a flow chart showing data transmission according to the related art.

[0033] The mobile terminal **100** requests the messenger server **160** for the authentication of the instant messenger ID input through the user interface (Step S**200**).

[0034] When the mobile terminal **100** requests the authentication of the predetermined ID, the messenger server **160** checks whether or not the requested ID is registered in the messenger server **160** (Step S**205**). As the check result, if the ID is registered, the messenger server **160** checks whether or not the ID to be authenticated is currently logged on (Step S**210**).

[0035] At Step S**210** of checking whether or not the messenger ID is logged on, if it is checked that the ID to be authenticated is currently logged on, the messenger server **160** searches and encodes the IP of the host computer **130** that matches with the ID to be authenticated and stored, and transmits the encoded IP to the mobile terminal **100** (Step S**215**).

[0036] If Step S**215** of transmitting the IP to the mobile terminal **100** is completed, the mobile terminal **100** decodes the encoded IP transmitted from the messenger server **160** to perform the authentication, and transmits a desired data file to the host computer **130** corresponding to the transmitted IP (Step S**220**).

[0037] Next, the data processing module **140** of the host computer **130** judges the characteristic of the data file transmitted from the mobile terminal **100** (Step S**225**).

[0038] As the judgment result of the characteristic, if the transmitted data file is judged as a short message, the data processing module **140** displays the short message on the screen of the host computer **130** (Step S**235**).

[0039] Meanwhile, with regard to the judgment result of the characteristic at Step S**230**, if it is judged that the transmitted data file is not the short message, the data processing module **140** outputs the transmitted data file to the image forming device **150** (Step S**240**). That is, the data processing module **140** judges that the transmitted data file is to be printed or transmitted to a receiving-side facsimile, and outputs the data file to the image forming device **150** together with a printing or facsimile job command.

[0040] When the data file is output to the image forming device **150**, the image forming device **150** performs a job corresponding to the command output from the data processing module **140** relative to the data file transmitted from the host computer **130** (Step S**245**). For example, if the printing command is output at Step S**240**, the image forming device **150** allows the data file to be printed at Step S**245**.

[0041] Meanwhile, if it is checked that the ID to be authenticated is not registered in the messenger server **160** at Step S**205**, the messenger server **160** generates an error message to notify that the ID is not registered and transmits the error message to the mobile terminal **100** (Step S**250**).

[0042] Further, if it is checked that the ID to be authenticated is logged off at Step S**210**, the messenger server **160** generates an error message to notify that the ID is logged off and transmits the error message to the mobile terminal **100** (Step S**250**).

[0043] Meanwhile, in the above-described related art, even though the data file transmitted from the mobile terminal **100** is not the short message, the data processing module **140** can display the received data file on the screen of the host computer **130**.

[0044] In the messenger service according to the related art described above, when an input device is applied to the mobile terminal **100** that is a consumer electronic (CE) device that is relatively limited compared with the host computer **130**, there is difficulty associated with setting the messenger account. Further, there is a difficulty in searching users for a buddy request and setting the relationship, thereby causing a difficulty in setting the buddy relationship.

SUMMARY OF THE INVENTION

[0045] Exemplary embodiments of the present invention overcome the above disadvantages and other disadvantages not described above. Also, the present invention is not required to overcome the disadvantages described above, and an exemplary embodiment of the present invention may not overcome any of the problems described above. An aspect of the present invention is to provide a system and method of sharing contents using a messenger program that registers CE devices of the same user or different users in a device server so as to register messenger accounts generated through the registration of the CE devices in the device, server and sets a buddy relationship among the CE devices of the same user and a buddy relationship among the CE devices of different users so as to share contents among the CE devices having the buddy relationship.

[0046] The various aspects of the present invention are not limited to those mentioned above, and other features and aspects of the present invention will be understood by those skilled in the art in view of the following description.

[0047] According to an aspect of the present invention, there is provided a system for sharing contents using a messenger program, the system including an account generation module which registers a CE device on the basis of device information transmitted from the CE device so as to generate a messenger account, a buddy setting module which sets a buddy relationship using a messenger client on the basis of the messenger account registered in a messenger server, a storage module which stores the device information, the messenger account, and the buddy relationship, and a communication module which provides the messenger account registered in the messenger server to the CE device.

[0048] According to another aspect of the present invention, there is provided a system for sharing contents using a messenger program, the system including a storage module which stores device information to be provided to a device server and a messenger account that is generated on the basis of the device information and registered in a messenger server, a display module which displays a content list and a buddy list, in which a buddy relationship is set, using the messenger account, and a control module, in response to contents being requested using the list displayed on the display module, allowing the contents to be provided.

[0049] According to another aspect of the present invention, there is provided a system for sharing contents using a messenger program, the system including a server module which registers a messenger account according to a messenger account registration request generated in a device server, and a communication module which provides acceptance or rejection of the request, in response to a request for a buddy relationship on the basis of the registered messenger account.

[0050] According to another aspect of the present invention, there is provided a method of registering a CE device using a device server, the method including receiving device information of a CE device connected to a device server, registering the CE device on the basis of the device information to generate a messenger account, requesting registration of the generated messenger account in a messenger server using a messenger client of the device server, and providing the messenger account to be registered according to the request to the CE device.

[0051] According to another aspect of the present invention, there is provided a method of sharing contents using a messenger program, the method including selecting a buddy relationship setting method according to a request for a buddy relationship among CE devices, searching a messenger account corresponding to the selected setting method, requesting for a buddy relationship of the CE devices including the messenger account on the basis of the search result, and sharing contents among the CE devices having the buddy relationship according to the request.

BRIEF DESCRIPTION OF THE DRAWINGS

[0052] The above and other features and aspects of the present invention will become more apparent by describing in detail exemplary embodiments thereof with reference to the attached drawings in which:

[0053] FIG. **1** is a diagram showing a data transmission system using a messenger service according to the related art;

[0054] FIG. **2** is a flowchart showing data transmission according to the related art;

[0055] FIG. **3** is a diagram showing a system for sharing contents using a messenger program according to an exemplary embodiment of the present invention;

[0056] FIG. **4** is a diagram showing setting of a buddy relationship among CE (Consumer Electronic) devices of the same user according to a first embodiment of the present invention;

[0057] FIG. **5** is a diagram showing setting of a buddy relationship among CE devices of different users according to a second exemplary embodiment of the present invention;

[0058] FIG. **6** is a flowchart showing, a process of registering CE devices according to an exemplary embodiment of the present invention;

[0059] FIG. **7** is a flowchart showing a process of sharing contents using a messenger program according to an exemplary embodiment of the present invention; and

[0060] FIG. **8** is a diagram showing a screen for content sharing according to an exemplary embodiment of the present invention.

DESCRIPTION OF THE EXEMPLARY EMBODIMENTS

[0061] Features and aspects of the present invention and methods of accomplishing the same may be understood more readily by reference to the following detailed descrip-

tion of exemplary embodiments and the accompanying drawings. The present invention may, however, be embodied in many different forms and should not be construed as being limited to the exemplary embodiments set forth herein. Rather, these exemplary embodiments are provided so that this disclosure will be thorough and complete and will fully convey the concept of the present invention to those skilled in the art, and the present invention will only be defined by the appended claims. Like reference numerals refer to like elements throughout the specification.

[0062] FIG. **3** is a diagram showing a system for sharing contents using a messenger program according to an exemplary embodiment of the present invention.

[0063] The system for sharing contents using a messenger program according to this exemplary embodiment connects a device server **300**, a CE device **330**, and a messenger server **355** through a communication network **380**, sets a buddy relationship among different CE devices **330** of the same user (not shown) and a buddy relationship among different CE devices **330** of different users, and transmits and receives a file by sharing contents among the CE devices **330** of the users.

[0064] In this exemplary embodiment, different users may be users who have CE devices **330** having the same messenger client or users who have different CE devices **330** having different messenger clients.

[0065] First, the device server **300** is a server that receives, from the CE device **330** of the user, device information of the corresponding device, registers the device, and generates a messenger account.

[0066] As shown in FIG. **3**, the device server **300** includes a communication module **305**, a control module **310**, a storage module **315**, an account setting module **320**, and a buddy setting module **325**. The device server **300**, including the above-described components, is connected to the CE device **330** and the messenger server **355** through the communication network **380**.

[0067] Here, the communication network **380** may be a wired or wireless Internet network but it is not limited thereto. For example, in a case where the CE device **330** of the user is a cellular phone, the communication network **380** may be CDMA, W-CDMA, or Power Line Communication (PLC) using a power line.

[0068] That is, the communication network **380** may vary depending on the CE device **330** of the user.

[0069] The communication module **305** receives the device information of the CE device **330** through the communication network **380**. Further, when registration of an account generated by the account generation module **320** is requested, the communication module **305** receives a response relative to the account registration from the messenger server **355** and transmits account information to be registered in the messenger server **355** to the CE device **330**.

[0070] The control module **310** controls the individual modules in the device server **300**. When the device information is provided from the CE device **330**, the control module **310** transmits the corresponding device information to the account generation module **320** and provides a messenger account generated by the account generation module **320** to the messenger server **355**. When the messenger server **355** completes the registration of the corresponding account, the messenger server **355** provides the registered messenger account information to the CE device **330**.

[0071] Further, the control module **310** generates a serial number request command for obtaining the device information of the CE device **330** and controls the device server **300** to set the buddy relationship or the execution or end of the messenger client of the CE device **330**. In addition, the control module **310** controls a content list and a device list provided by setting the buddy relationship among the buddies of CE devices **330** and sharing of contents selected by the user on the basis of the content list and the device list.

[0072] The storage module **315** stores the device information provided from the CE device **330**, the messenger account information generated by the account generation module **320**, the buddy relationship information set by the buddy setting module **325**. The storage module **315** also stores a messenger client program for using the messenger service.

[0073] At this time, a plurality of messenger client programs may be stored and provided to the CE devices **330** having different messenger clients.

[0074] The account generation module **320** registers the CE device **330** on the basis of the device information received through the communication module **305** and generates the messenger account on the basis of the device information. When the messenger account is generated, the user may set user information for identifying the CE device **330**, for example, a user-defined device name or a user name. The user information may be used as identification information relative to a user and a device having the buddy relationship.

[0075] The messenger server **355** is requested to register the messenger account generated by the account generation module **320** and the corresponding account is registered according to the request.

[0076] If the messenger account is registered in the messenger server **355**, the buddy relationship among the CE devices **330** of different users who use a web service and the buddy relationship among the CE devices **330** of the same user are set by the buddy setting module **325** on the basis of the corresponding account.

[0077] The device information for the device registration and the generation of the messenger account may be the serial number of the CE device **330**. That is, if the serial number is received, the account generation module **320** generates a messenger ID, a password, user setting information, for example, the messenger account including the user-defined device name and user name using the corresponding serial number.

[0078] The messenger account may be used to set the buddy relationship among the CE devices **330** of the same user and may be used to set the buddy relationship among CE devices **330** of different users using the user information.

[0079] The generation of the messenger account and the device registration will be described in detail with reference to FIG. **6**.

[0080] The buddy setting module **325** registers the messenger account generated according to the registration of the CE device **330** by the account generation module **320** in the messenger server **355** and sets the buddy relationship among the CE devices **330** using the messenger account registered in the messenger server **355**.

[0081] The buddy relationship set by the buddy setting module **325** is set on the basis of the messenger account registered in the messenger server **355** using the messenger client stored in the storage module **315**. The buddy relation-

ship includes the buddy relationship among the CE devices of the same user and the buddy relationship among the CE devices of different users.

[0082] The buddy relationship among the CE devices **330** of the same user is based on the pre-registered messenger accounts of the CE devices **330**. Further, the buddy relationship among the CE devices of different users is based on information of the users who use the messenger service through the web service.

[0083] When a device requests another device for a buddy relationship on the basis of the messenger account to be registered in the messenger server **355**, a messenger client is executed to request the messenger server **355** for the buddy relationship. Then, when another device informs that the request is accepted, the above-described buddy relationship is set.

[0084] As described above, if the buddy relationship is set, the CE device **330** displays a list of the CE devices **330** of the same user, a list of the CE devices **330** of different users, and a content list selected by the user through a display module **350**.

[0085] The CE device **330** may include a communication module **335** that performs communication between the above-described device server **300** and the messenger server **355**, a control module **340**, a storage module **345**, and a display module **350**.

[0086] The CE device **330** may include a portable device, such as a PDA, a notebook computer, a cellular phone, or the like. Further, the CE device **330** may include all devices, such as a PC, which has limited portability but can be connected to the corresponding device so as to use an Internet service.

[0087] According to the kinds of CE devices **330**, there may be different access methods to the device server **300**.

[0088] For example, in a case where the CE device **330** of the user is a PDA or a notebook computer, the device information is provided when the corresponding device is booted and accesses the device server **300** through the communication module **335**. Meanwhile, in case of a device, such as a cellular phone, which is always turned on, the access to the device server **300** is made through a user input.

[0089] That is, the CE device **330** accesses the device server **300** through an automatic access upon booting of the corresponding device or a manual access by the user input. Further, the CE device **330** may access the messenger server **355** in the same manner.

[0090] The CE device **330** that accesses the device server **300** in such a manner provides the device information to the device server **300** through the communication module **335**. If the messenger account generated when the device information is provided is registered in the messenger server **355**, the CE device **330** receives and stores the corresponding messenger account.

[0091] The communication module **335**, transmits and receives information about the request of the buddy relationship and acceptance/rejection of the buddy relationship, the contents or the content list of the CE device **330** having the buddy relationship, in addition to the above-described information.

[0092] When the contents is requested through the content list and the buddy list of the CE device **330** having the buddy relationship, the control module **340** controls to provide the contents or the content list stored in the storage module **345**.

[0093] The storage module **345** stores the messenger client, the contents, and the messenger account for setting the buddy relationship and stores the content list stored in the corresponding device.

[0094] The display module **350** displays a user device list having the buddy relationship, a buddy device list of other users having the buddy relationship, and the content list for sharing the contents.

[0095] The messenger client of the CE device **330** may be incorporated into the corresponding device upon delivery from a warehouse. However, in a case where the messenger client is not incorporated into the corresponding device, the messenger client may be downloaded from the device server **300** so as to synchronize the messenger clients among the devices having different messenger client programs.

[0096] The messenger server **355** may provide a messenger service on the Internet. The messenger server **355** registers the messenger account generated by the device server **300**, manages a buddy list, transmits chatting messages among the users, and relays file transmission. A general server, such as Jabber, MSN, Yahoo, Google, AOL, or the like, may be used.

[0097] The buddy list is used to set the buddy relationship among the messenger users by the messenger server **355**. When the buddy relationship between the user and the CE device **330** is set, the user can determine the access state of another user. The buddy list is used to perform chatting and to share the files.

[0098] The messenger server **355** may include a communication module **360**, a control module **365**, a server module **370**, and a storage module **375**.

[0099] The communication module **360** receives a request to register the messenger account generated by the device server **300** and transmits acceptance/rejection of the request to the device server **300**. Further, the communication module **360** receives a request to set the buddy relationship from the buddy setting module **325** and transmits acceptance/rejection of the request to the buddy setting module **325**. In addition, the communication module **360** transmits and receives general information required for the messenger service.

[0100] The control module **365** transmits a messenger account registration request and a buddy relationship setting request to the server module **370** and controls the messenger server **355**.

[0101] The server module **370** may include a dispatch server, a notification server, and a switchboard server.

[0102] Among these, the dispatch server is a module defined by an Internet draft Microsoft Network (MSN) messenger service 1.0 protocol (MSN 1999) of IETF (Internet Engineering Task Force). That is, the dispatch server refers to a server program that judges a normal user by a version check of a protocol when the messenger client is connected and a computer system on which the corresponding program operates.

[0103] The notification server refers to a server program that supports the messenger client so as to be continuously connected to the messenger service and on which a logon job is performed, and a computer system on which the corresponding program operates. The switchboard server refers to a server program that relays the transmission of the instant messages of the users and a computer system on which operates a corresponding program.

[0104] The messenger server **355** may transmit a short message according to whether or not different users who have the buddy relationship use the messenger service.

[0105] The sharing of the contents using a messenger function assumes that the CE device has access to the messenger server **355**. Accordingly, since the contents of the CE devices **330** of the users who do not access the corresponding server cannot be shared, the short message is transmitted to the CE device **330** of a different user who has the buddy relationship but does not access the messenger server **355** so as to transmit an access request message for sharing the contents to the corresponding CE device **330**.

[0106] That is, in the CE device **330** that receives the corresponding message, the messenger client is automatically performed or the access to the messenger server **355** is made, such that the contents can be shared.

[0107] The storage module **375** of the messenger server **355** is a storage medium that stores messenger account information and buddy relationship information.

[0108] The system for sharing contents including the device server **300**, the CE device **330**, and the messenger server **355** according to this exemplary embodiment is a system that sets the buddy relationship among the CE devices **330** or among the users by registering the corresponding device when the device information of the CE device **330** of the user is provided to the device server **300**, generating the messenger account, and registering the generated messenger account in the messenger server **355** so as to provide the registered messenger account to the CE device **330**.

[0109] When the buddy relationship is set, the user can receive contents in the CE device **330** of another user through his/her CE device **330** and can share contents among his/her different CE devices **330**.

[0110] FIG. **4** is a diagram showing setting of a buddy relationship among the CE devices of the same user according to a first exemplary embodiment of the present invention.

[0111] According to this first exemplary embodiment, the buddy relationship among the CE devices of the same user is set so as to share contents by setting the buddy relationship using the messenger accounts of the plurality of CE devices **330** of the same user.

[0112] As shown in FIG. **4**, a first user **400** may have first and second CE devices **410** and **420**.

[0113] For example, if the first CE device **410** is pre-registered in the device server **300** and the second CE device **420** to be subsequently registered requests the first CE device **410** for a buddy relationship, the first CE device **410** judges whether to accept/reject the request. Then, the buddy relationship is set between the first and second CE devices **410** and **420**.

[0114] First and second CE devices **440** and **450** of a second user **430** may have a buddy relationship in the same manner as in the first user **400**. Therefore, the detailed description will be omitted.

[0115] Upon setting the buddy relationship among the devices of the same user, acceptance/rejection of the buddy relationship request is automatically performed using the messenger account. That is because information other than serial numbers of the messenger accounts stored in the CE devices **410**, **420**, **440**, and **450** can be generated by the same user, for example, the first user **400** or the second user **430**.

[0116] FIG. **5** is a diagram showing setting of a buddy relationship among the CE devices of different users according to a second exemplary embodiment of the present invention.

[0117] According to the second exemplary embodiment, the buddy relationship among the CE devices **330** of different users is set so as to share contents among the CE devices **330** of the users.

[0118] Like the buddy relationship shown in FIG. **4**, the setting of the buddy relationship according to this second exemplary embodiment assumes that first and second CE devices **510**, **520**, **540**, and **550** of first and second users **500** and **530** are pre-registered in the device server **300**. However, the buddy relationship is not set on the basis of the messenger accounts. In this case, the buddy relationship is set among web users.

[0119] When the first and second CE devices **510**, **520**, **540**, and **550** of the first and second users **500** and **530** are registered, the buddy relationship among web users may be set on the basis of the user information, for example, the device name and the user name, through the input module (not shown) of the CE device **330** on the device server **300**. However, the information used for setting the buddy relationship among the users is not limited thereto. The above-described device name and user name may be substituted with a unique number corresponding to the serial number of the CE device **330** to be transmitted to the device server **300** upon the registration of the device.

[0120] For example, if the second user **530** requests the first user **500** for the buddy relationship, the first user **500** responds whether to accept/reject the corresponding request. Then, the buddy relationship is set between the users. If the buddy relationship is set between the users, the buddy relationship is set among the first and second CE devices **510**, **520**, **540**, and **550** of the users, such that the contents are shared by the corresponding devices.

[0121] FIG. **6** is a flowchart showing a process of registering CE devices according to an exemplary embodiment of the present invention.

[0122] According to this exemplary embodiment, the device registration is performed by registering the devices in the device server **300** using the device information of the CE devices **330**.

[0123] First, it is judged whether or not one or more CE devices **330** among the plurality of CE devices **330** of the users are connected to the device server **300** (operation S**600**).

[0124] If the CE devices **330** are connected to the device server **300**, the device server **300** receives the device information from the CE devices **330** (operation S**610**).

[0125] The received device information may be the serial numbers used to register the devices or to generate the account, or may be content information used to construct the content list.

[0126] The device server **300** that receives the device information uses the serial numbers to generate the messenger accounts with the messenger ID, the password, the user-defined device name and the user name (operation S**620**), and executes the messenger client to request the messenger server **355** for account registration (operation S**630**).

[0127] Each of the accounts generated by the device server **300** become unique information as identification informa-

tion relative to the corresponding user and the CE device **330** when using the messenger service.

[0128] The device server **300** executes the messenger client to request the messenger server **355** for the account registration. With the request for the account registration, if a response relative to the registration is received from the messenger server **355** (operation S**640**), the messenger client that is being executing on the device server **300** ends.

[0129] The device server **300** stores the accounts registered in the messenger server **355** in the storage module **315** and transmits the accounts to the CE devices **330** through the communication module **305**.

[0130] The CE device **330** that receives the registered messenger account automatically stores the corresponding account (operation S**650**). Thereafter, the process of registering the CE device **330** is completed.

[0131] The process of registering other CE devices **330** of the user is performed in the same manner as the above-described process. In order to judge whether or not different CE devices **330** are owned by the same user, a process of searching the user and the pre-registered messenger account of the CE device **330** may also be included.

[0132] Through the above-described process of registering devices, the user executes the messenger client of the CE device **330** to request for setting the buddy relationship for contents sharing. If the buddy relationship is set, the contents of the CE devices **330** may be shared.

[0133] FIG. **7** is a flowchart showing a process of sharing contents using a messenger program according to an exemplary embodiment of the present invention.

[0134] The buddy relationship according to the embodiment of the present invention represents contents sharing through the setting of the buddy relationship among the CE devices **330** of the same user or the buddy relationship among the CE devices **330** of different users using the above-described process of registering devices shown in FIG. **6**.

[0135] First, the user registers the CE device **330** in the device server **300** (operation S**700**). When the registration of the corresponding device is completed (operation S**705**), it is judge whether or not the buddy relationship is set (operation S**710**).

[0136] In order to set the buddy relationship, the user selects a buddy relationship setting method (operation S**715**).

[0137] The reason why the user selects the buddy relationship setting method is that the buddy relationship can be set by at least one of a method of setting the buddy relationship among different CE devices **330** of the same user (operation S**720**) and a method of setting the buddy relationship among the CE devices **330** of different users (operation S**760**).

[0138] If the method of setting the buddy relationship among the devices of the same user is selected as the buddy relationship setting method (operation S**720**), the device server **300** ends the messenger client that is being executed on the CE device **330**. Then, the device server **300** executes the messenger client of the device server **300** using the messenger account of the CE device **330** (operation S**725**).

[0139] If two CE devices **330** of the same user log on using, for example, an ID **1** and an ID **2** and the ID **2** requests the ID **1** for the buddy relationship, the device server **300** requests the messenger server **355** for the buddy relationship using the internal messenger client of the corresponding server (operation S**730**).

[0140] When the buddy relationship is requested from the messenger server **355** (Step S**730**), a user account and a messenger account of the CE device **330** that logs on using the ID **1** are searched (operation S**735**).

[0141] The user and the CE device **330** are searched using information, such as messenger account information, the user-defined device name, and the user name generated and registered in the device server **300**.

[0142] If the user and the CE device **330** corresponding to the ID **1** are searched (operation S**735**), the ID **2** receives a response to the request to the buddy relationship from the ID **1** by the messenger server **355** (operation S**740**).

[0143] When the response indicates acceptance of the buddy relationship, the device server **300** ends the messenger client of the device server **300** on which the CE devices **330** log-on using the ID **1** and the ID **2**, and requests different CE devices **330** of the same user having the messenger accounts of the ID **1** and the ID **2** to perform the messenger client again. If the messenger clients of the CE devices **330** are performed again according to the request of the device server **300** (operation S**745**), it is judged whether or not the buddy relationship relative to the CE devices **330** of the same user is completely set (operation S**750**).

[0144] If the buddy relationship is completely set, the content list is displayed on the screen of the CE device **330** using the content information of the corresponding device, such that the contents are shared (operation S**755**).

[0145] In the process of sharing content in operation S**755**, when the contents selected by the user through the content list displayed on the CE device **330** are requested and accepted, the corresponding contents are transmitted. Therefore, the contents are shared among the CE devices **330**.

[0146] Meanwhile, the process of setting the buddy relationship among the users in operation S**760** is similar to the operation of performing the messenger client again in operation S**725** through the operation of sharing the contents in operation S**755**. However, the process of searching the accounts in operation S**735** may be different. Here, the process of searching may be a process of searching the user-defined device name and user name, and the unique number corresponding to the serial number of the corresponding device upon the registration of the CE device **330**.

[0147] FIG. **8** is a diagram showing a screen for contents sharing according to an exemplary embodiment of the present invention.

[0148] On the screen for contents sharing according to this exemplary embodiment, information displayed on the CE device **330** using contents sharing is shown.

[0149] First, on the display module **350** of the CE device **330** that may be owned by the user, a user device list **810** relative to the CE devices **330** of the user and a buddy device list **820** in which the buddy relationship is set among different users may be displayed.

[0150] Here, the user device list **810** is a list of devices of the same user who has the buddy relationship using the messenger account and the buddy device list **820** is a list in which the buddy relationship is set among different users.

[0151] That is, the user may select his/her CE device **330** from the user device list **810** so as to receive a content list **830** relative to the contents stored in the corresponding

device and receive device information of the CE device **330** and the content list **830** of another user using the buddy device list **820**.

[0152] The user who receives the user device list **810**, the buddy device list **820**, and the content list **830** selects a desired content and requests the content on the basis of the corresponding list. If the CE device **330** that receives the contents request accepts the request, the corresponding contents are transmitted to the device that requests the contents, such that the contents are shared between the CE devices **330**.

[0153] On the screen for contents sharing between the CE devices **330** having the buddy relationship, examples of the user device list **810**, the buddy device list **820**, and the content list **830** are shown. However, the screen for contents sharing of the CE device **330** of the user is not limited thereto.

[0154] Although the invention has been described in connection with the exemplary embodiments of the invention, it, will be apparent to those skilled in the art that various modifications and changes may be made thereto without departing from the scope and spirit of the invention. Therefore, it should be understood that the above embodiments are not limitative, but illustrative in all aspects. The scope of the invention is defined by the appended claims rather than by the description preceding them, and all changes and modifications that fall within metes and bounds of the claims, or equivalents of such metes and bounds are therefore intended to be embraced by the claims.

[0155] According to the system and method of sharing contents using a messenger program according to an embodiment of the present invention, an input procedure by the user relative to predetermined information to use the messenger service may be minimized in the CE device having a limited input device. Further, a method of searching a user and a device for setting the buddy relationship may be simplified.

What is claimed is:

1. A system for sharing contents using a messenger program, the system comprising:

an account generation module which registers a consumer electronic (CE) device on the basis of device information transmitted from the CE device to generate a messenger account;

a buddy setting module which sets a buddy relationship using a messenger client on the basis of the messenger account registered in a messenger server;

a storage module which stores the device information, the messenger account, and the buddy relationship; and

a communication module which provides the messenger account registered in the messenger server to the CE device.

2. The system of claim **1**, wherein the messenger account comprises at least one of a messenger ID, a password, and user information generated on the basis of a serial number of the CE device.

3. The system of claim **1**, wherein the buddy relationship comprises a buddy relationship among CE devices of one user and a buddy relationship among CE devices of different users.

4. A system for sharing contents using a messenger program, the system comprising:

a storage module which stores device information to be provided to a device server, and a messenger account generated on the basis of the device information and registered in a messenger server;

a display module which displays a content list and a buddy list, in which a buddy relationship is set, using the messenger account; and

a control module which provides the contents in response to the contents being requested using the list displayed on the display module.

5. The system of claim **4**, wherein the messenger account comprises at least one of a messenger ID, a password, and user information generated on the basis of a serial number of the CE device.

6. The system of claim **4**, wherein the buddy relationship comprises a buddy relationship among CE devices of one user and a buddy relationship among CE devices of different users.

7. A system for sharing contents using a messenger program, the system comprising:

a server module which registers a messenger account according to a messenger account registration request generated in a device server; and

a communication module which provides an acceptance or a rejection of a buddy relationship request in response to a buddy relationship being requested on the basis of the registered messenger account.

8. A method of registering a CE device using a device server, the method comprising:

receiving device information of a CE device connected to a device server;

registering the CE device on the basis of the device information to generate a messenger account;

requesting registration of the generated messenger account in a messenger server using a messenger client of the device server; and

providing the messenger account to be registered according to the request to the CE device.

9. The method of claim **8**, wherein the device server is connected to the CE device through at least one communication network among code division multiple access (CDMA), wideband code division multiple access (W-CDMA), wireless broadband (Wibro), and power line communication (PLC).

10. The method of claim **8**, wherein the messenger account comprises at least one of a messenger ID, a password, and, user information on the basis of a serial number provided from the CE device.

11. A method of sharing contents using a messenger program, the method comprising:

selecting a buddy relationship setting method according to a request for a buddy relationship among CE devices;

searching a messenger account corresponding to the selected buddy relationship setting method;

requesting a buddy relationship among the CE devices including the messenger account on the basis of the search result; and

sharing contents among CE devices having the buddy relationship according to the requested buddy relationship.

12. The method of claim **11**, wherein the CE device provides device information requested by a device server for device registration and receives a messenger account again when the messenger account generated on the basis of the device information is registered in a messenger server.

13. The method of claim **12**, wherein the device server sets the buddy relationship among the CE devices including the messenger account using a messenger client.

14. The method of claim **11**, wherein the buddy relationship comprises a buddy relationship among CE devices of one user and a buddy relationship among CE devices of different users using the message account.

15. The method of claim **11**, wherein the contents sharing is performed by transmitting contents selected by a user on the basis of a content list and a buddy list of the CE devices having the buddy relationship.

16. The method of claim **11**, further comprising registering a CE device by providing device information of the CE device to a device server;

generating the messenger account in the device server on the basis of the device information; and

registering the generated messenger account in the messenger server.

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