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(54) **GRAPHICAL USER INTERFACE WHICH  
DISPLAYS PROFILE INFORMATION  
ASSOCIATED WITH A SELECTED CONTACT**

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**H04M 1/725** (2006.01)  
**G06Q 10/10** (2012.01)  
**G06F 3/01** (2006.01)  
**G06F 3/0481** (2013.01)

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CPC ..... **H04M 1/72552** (2013.01); **G06Q 10/10** (2013.01); **G06F 3/0481** (2013.01)

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USPC ..... 715/751, 752, 753, 758  
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,880,731 A *	3/1999	Liles et al. ....	715/758
7,752,553 B2 *	7/2010	Pennington et al. ....	715/751
8,032,470 B1 *	10/2011	Heidenreich et al. ....	706/45
8,538,895 B2 *	9/2013	Appelman et al. ....	705/319
2001/0048449 A1 *	12/2001	Baker .....	345/758
2002/0130904 A1 *	9/2002	Becker et al. ....	345/753
2006/0031772 A1 *	2/2006	Valeski .....	715/751
2007/0162432 A1 *	7/2007	Armstrong et al. ....	707/3
2009/0063995 A1 *	3/2009	Baron et al. ....	715/753

\* cited by examiner

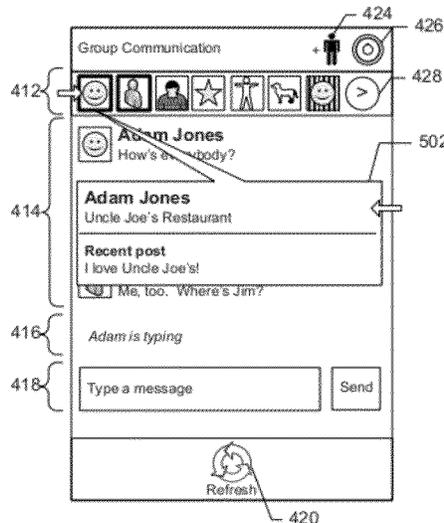
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(57) **ABSTRACT**

A system and machine-implemented method for presenting profile information on an electronic device of a user, the profile information being associated with a contact of the user, via displaying a contact icon on a graphical user interface of the electronic device, the contact icon corresponding to a contact of the user; receiving user input which specifies selection of the contact icon; and displaying profile information, obtained from a profile associated with the contact corresponding to the selected contact icon, on the graphical user interface.

**22 Claims, 12 Drawing Sheets**



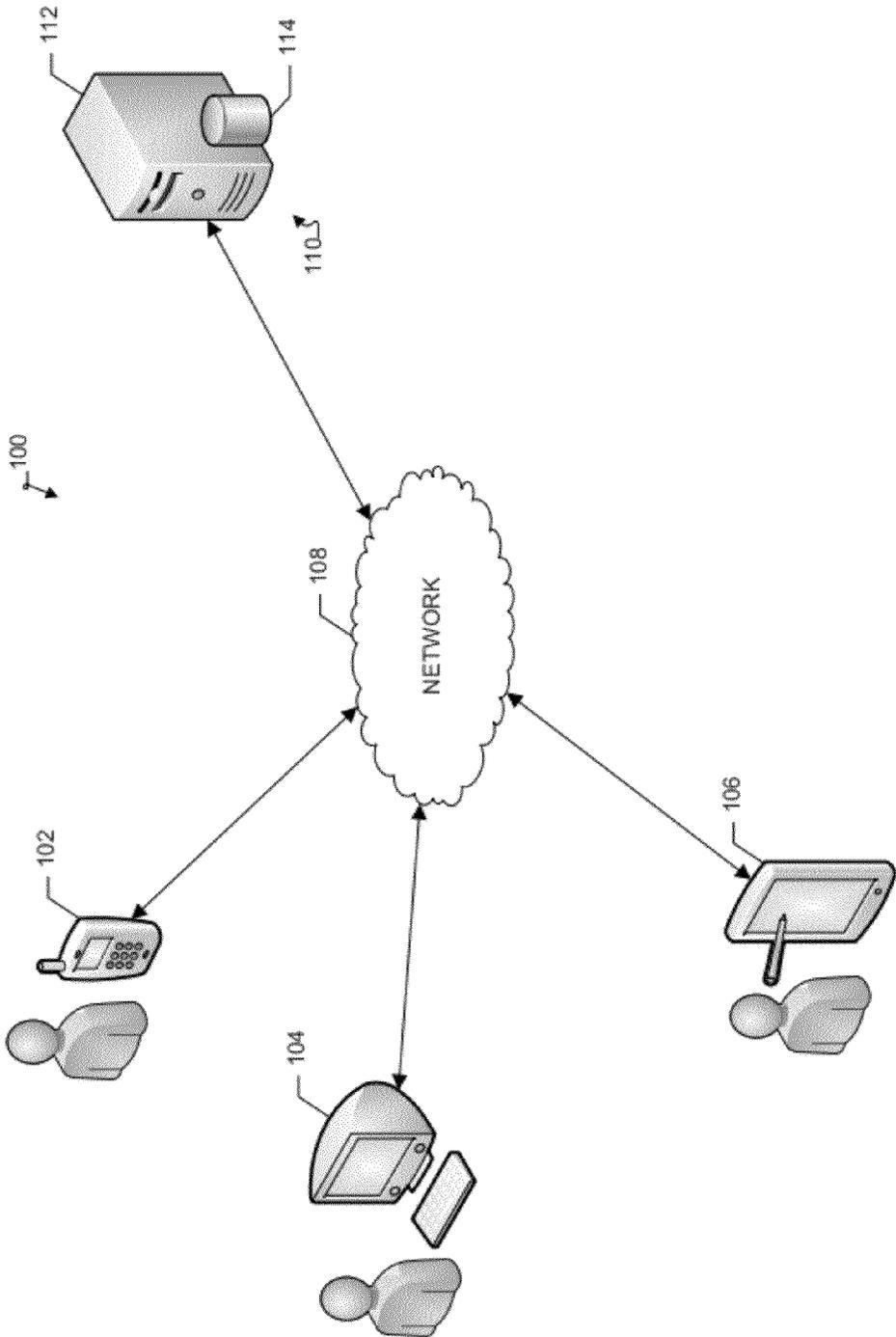


FIG. 1

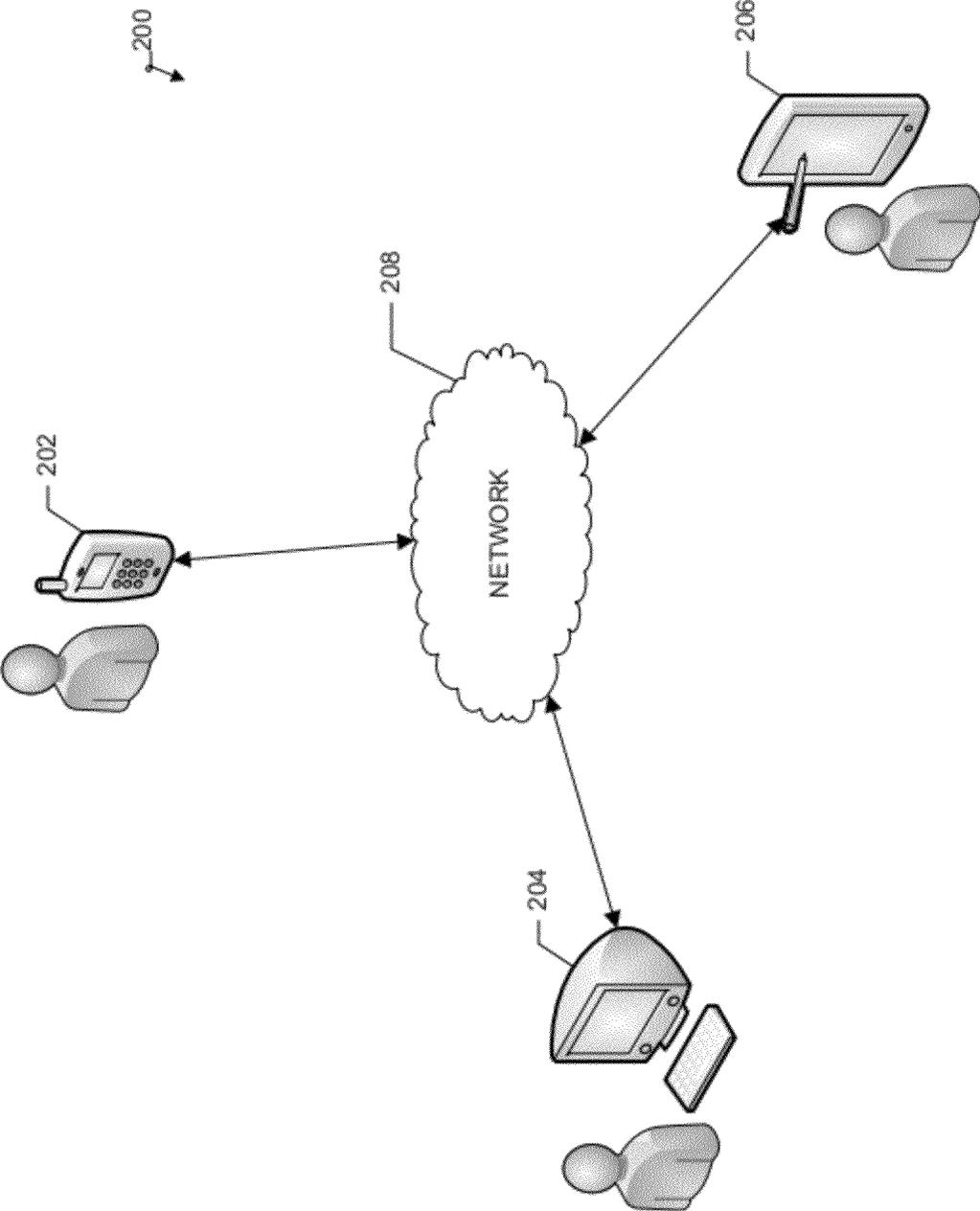


FIG. 2

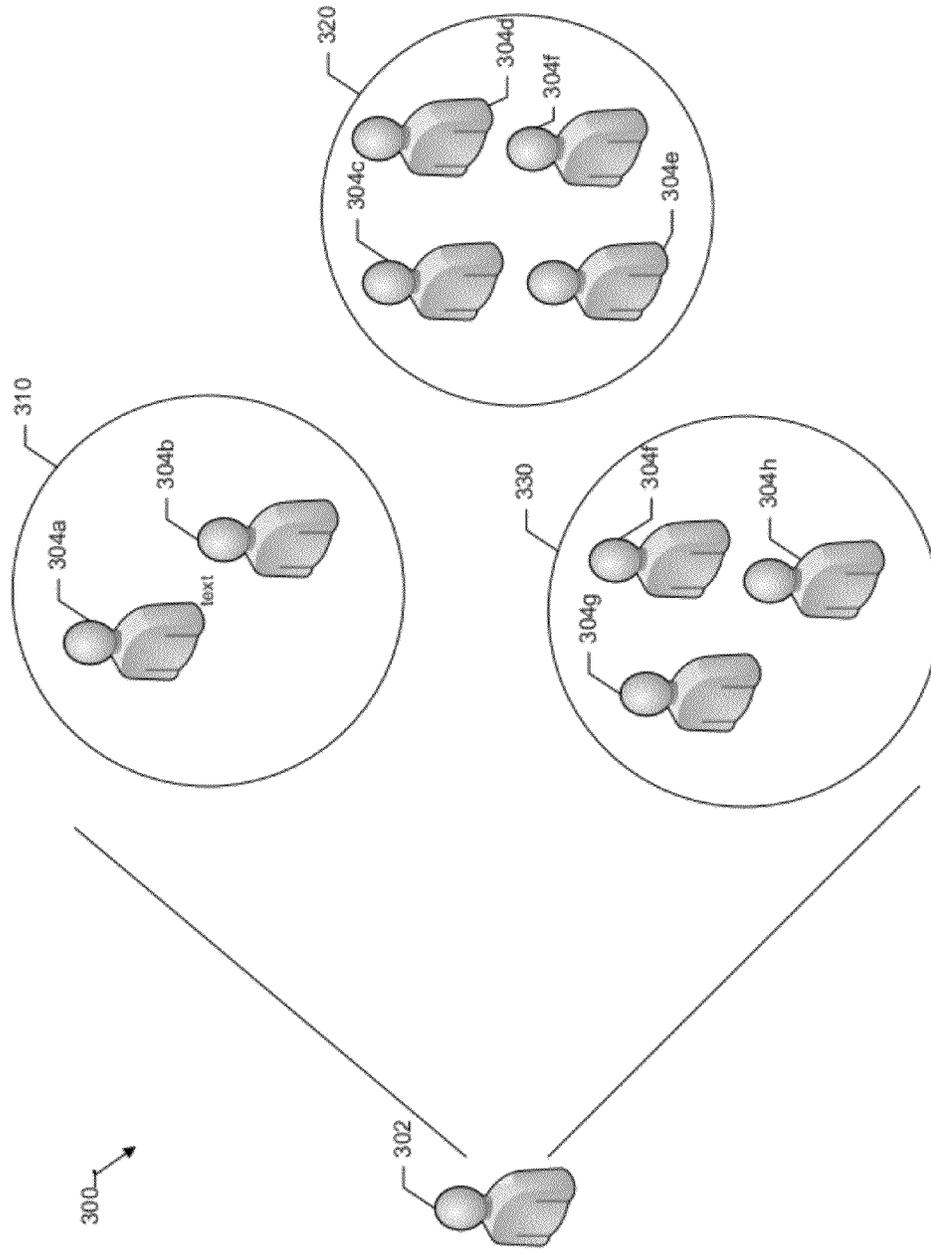


FIG. 3

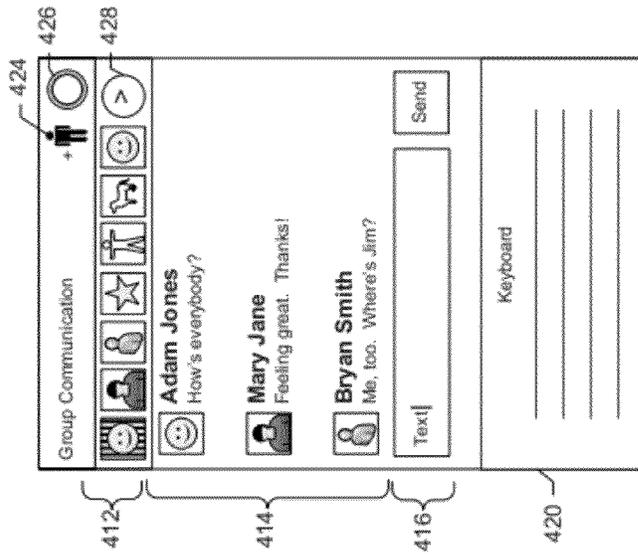


FIG. 4C

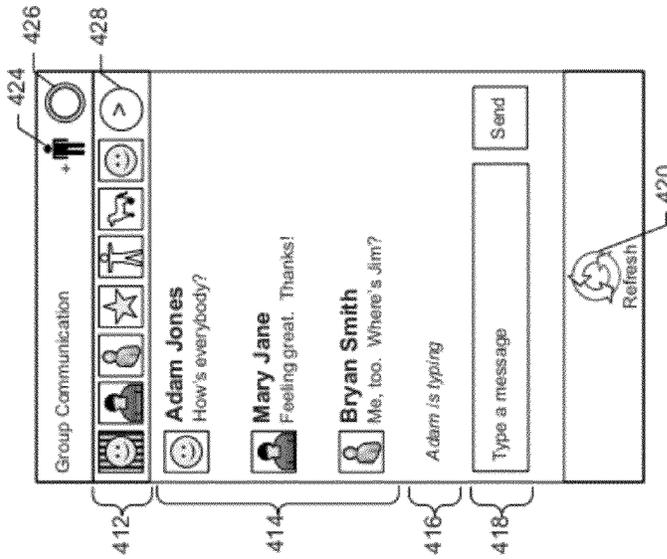


FIG. 4B

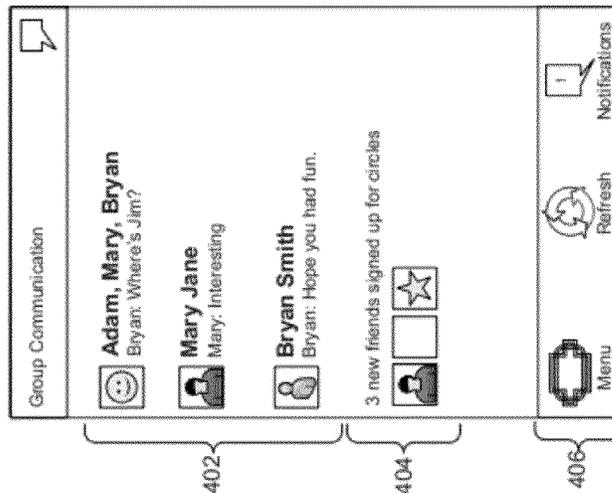


FIG. 4A

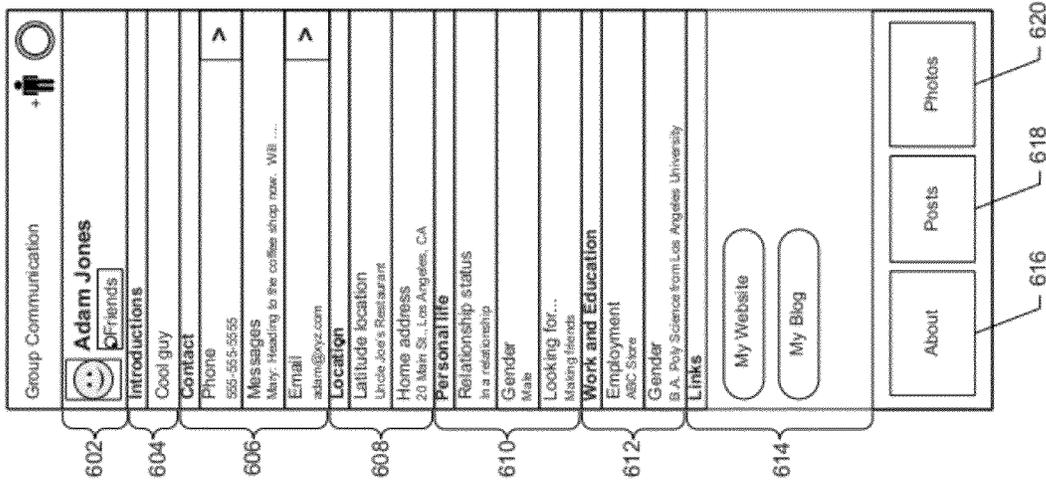


FIG. 6

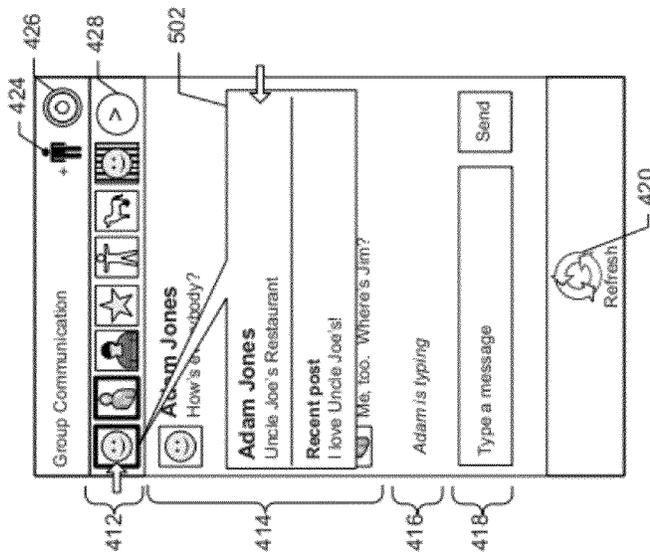


FIG. 5

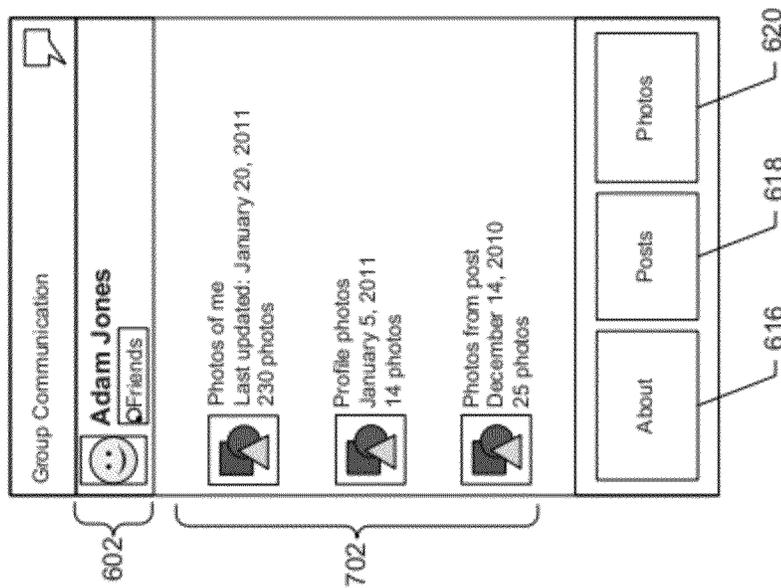


FIG. 7

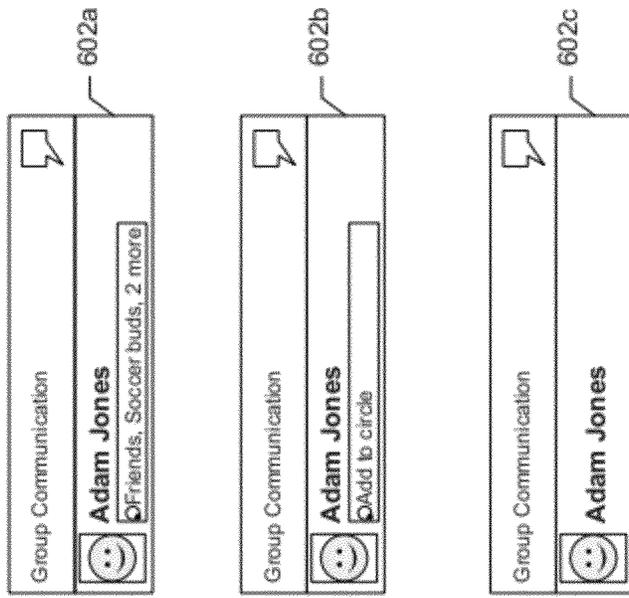


FIG. 8

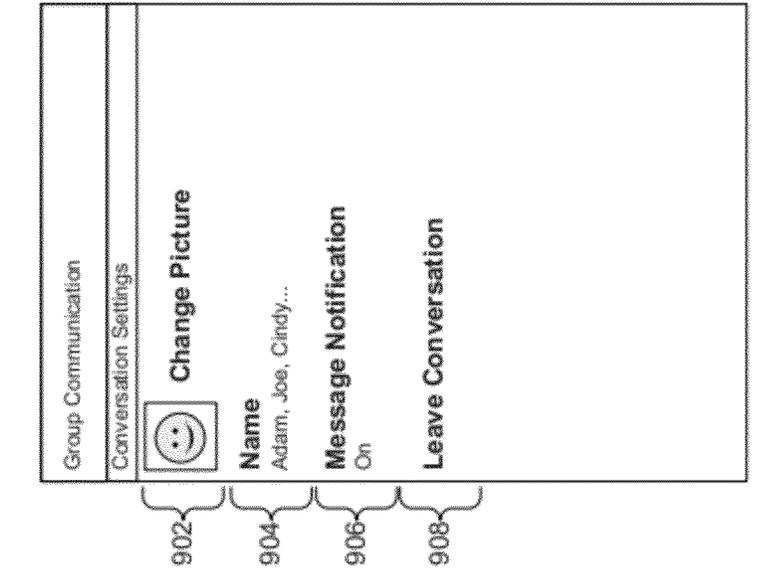


FIG. 9A

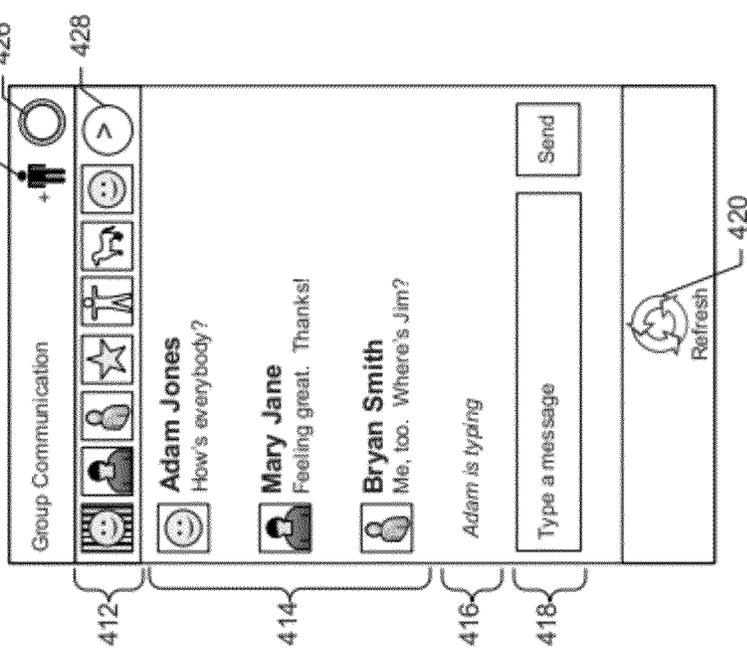


FIG. 9B



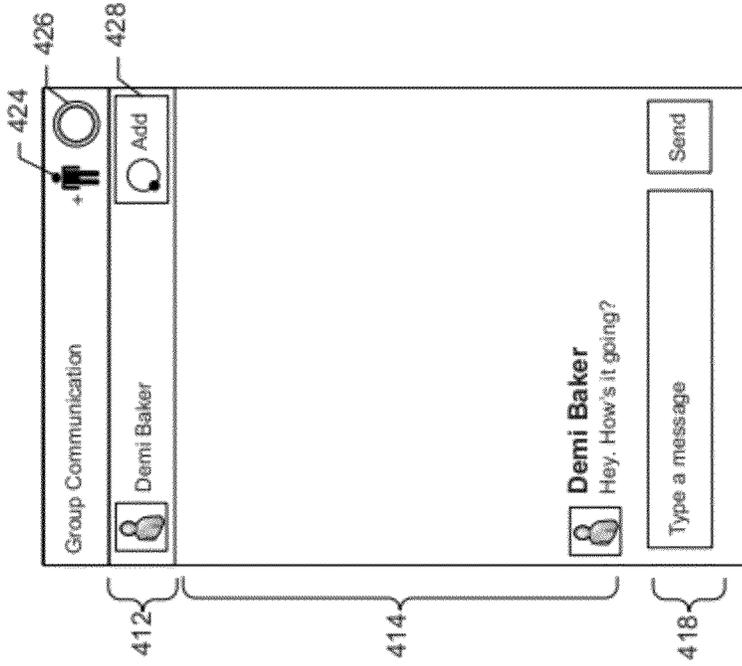


FIG. 12A

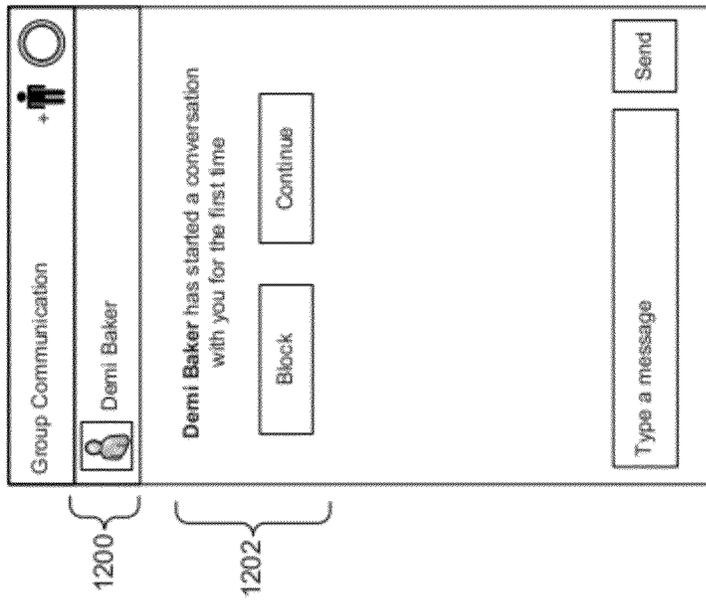


FIG. 12B

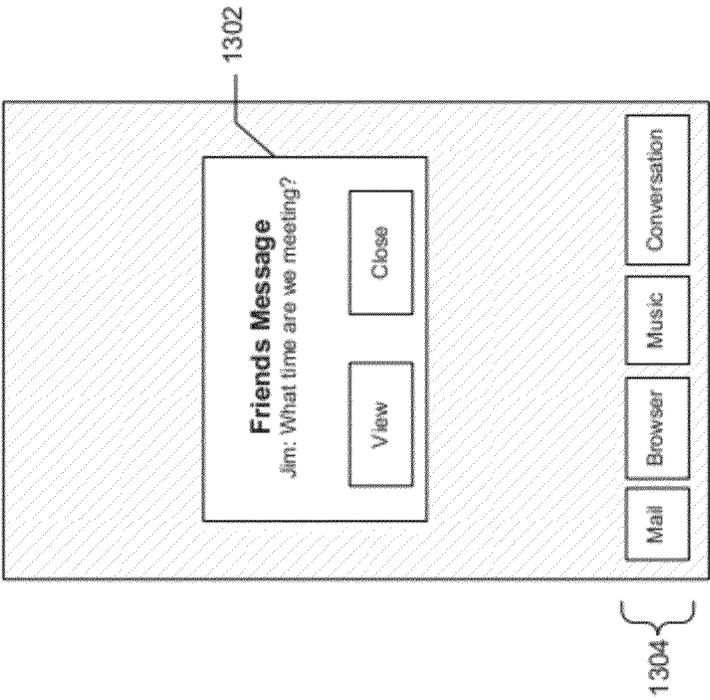


FIG. 13

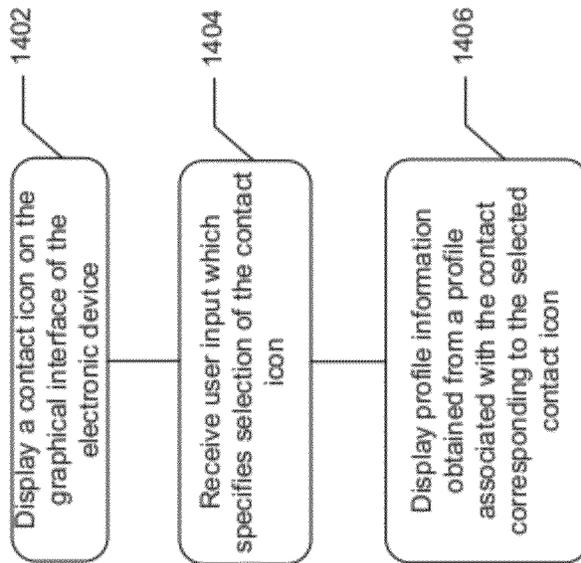


FIG. 14

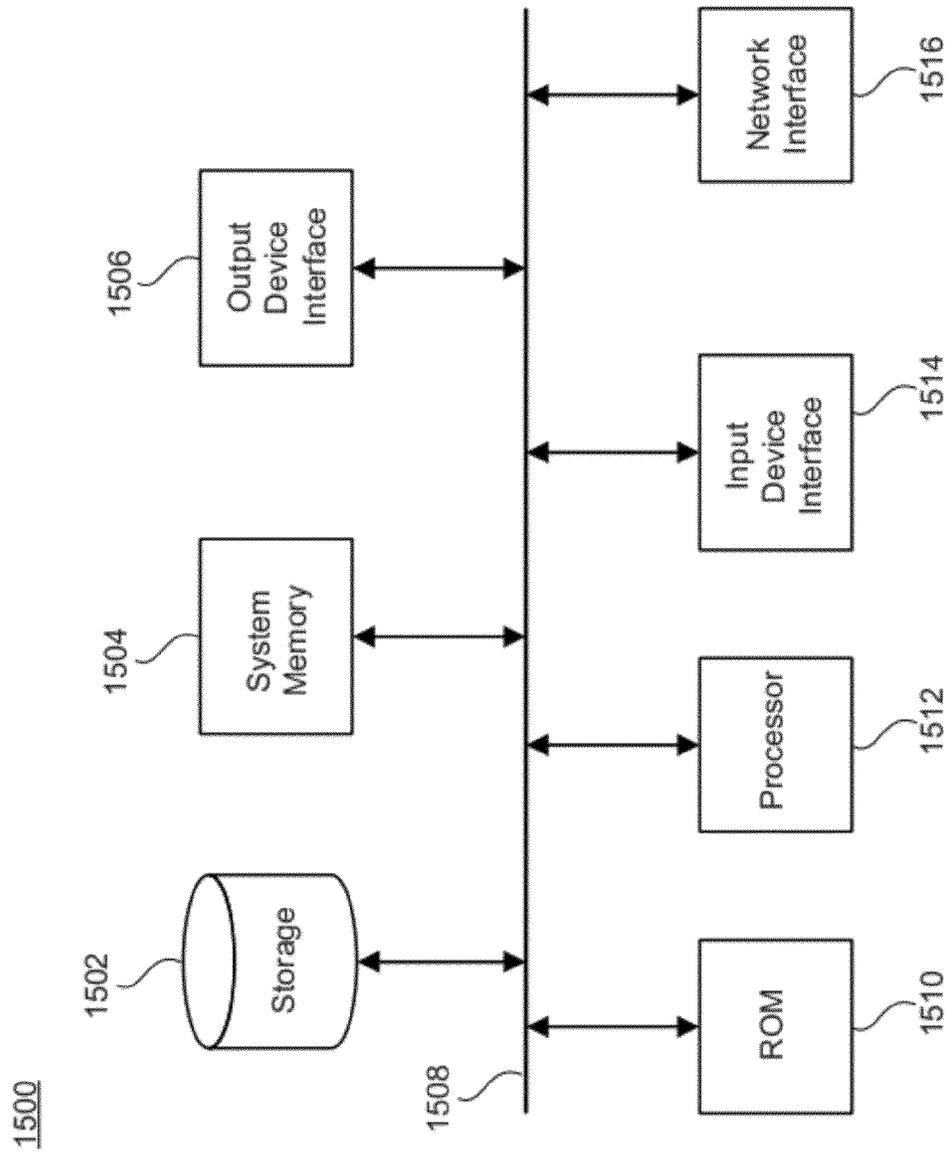


FIG. 15

**GRAPHICAL USER INTERFACE WHICH  
DISPLAYS PROFILE INFORMATION  
ASSOCIATED WITH A SELECTED CONTACT**

CROSS-REFERENCE TO RELATED  
APPLICATION

The present application claims the benefit of U.S. Provisional Patent Application Ser. No. 61/501,165, entitled "Graphical User Interface Which Displays Profile Information Associated With A Selected Contact," filed on Jun. 24, 2011, the contents of which are hereby incorporated by reference in its entirety for all purposes.

BACKGROUND

The subject disclosure generally relates to communication between users of electronic devices, and, in particular, to group conversation between a plurality of participants.

When using electronic devices such as computers, cell phones or personal digital assistants (PDAs), it is possible to communicate with people on a 1:1 basis (e.g., via SMS text messaging, phone calls). It is also possible to broadcast messages to the public, for example, via a computer-implemented social networking service.

However, it is difficult to participate in ongoing electronic conversation with a select group of people. For example, the user of an electronic device may want to contact his/her family, friends, or a small group of work colleagues. Furthermore, since multiple participants are involved, it can be difficult to organize display of such a conversation. Thus, a quicker and more convenient way to initiate communication with a select group of people, and to participate in an ongoing conversation with that group, may be desirable.

SUMMARY

The disclosed subject matter relates to a machine-implemented method for presenting profile information on an electronic device of a user, the profile information being associated with a contact of the user, via displaying a contact icon on a graphical user interface of the electronic device, the contact icon corresponding to a contact of the user; receiving user input which specifies selection of the contact icon; and displaying profile information, obtained from a profile associated with the contact corresponding to the selected contact icon, on the graphical user interface.

The disclosed subject matter also relates to a system for presenting profile information on an electronic device of a user, the system comprising one or more processors; and a machine-readable medium comprising instructions stored therein, which when executed by the processors, cause the processors to perform operations comprising displaying a collection of contact icons on a graphical user interface of the electronic device, each contact icon respectively corresponding to one of a plurality of participants of a group conversation, wherein the group conversation provides for sharing communication messages among the plurality of participants including the user over a server; receiving user input which specifies selection of one of the contact icons in the collection of contact icons; and displaying profile information, obtained from a profile associated with the participant respectively corresponding to the selected contact icon, on the graphical user interface.

The disclosed subject matter further relates to a machine-readable medium comprising instructions stored therein, which when executed by a machine, cause the machine to

perform operations comprising displaying a contact icon on a graphical user interface of an electronic device of a user, the contact icon corresponding to a contact of the user; receiving user input which specifies selection of the contact icon; and displaying profile information, obtained from a profile associated with the contact corresponding to the selected contact icon, on the graphical user interface, wherein the profile information is displayed in at least one of a hover card and a full profile view, wherein the hover card is presented as an overlay on top of the current display on the graphical user interface, and wherein the full profile view is presented as a separate display on the graphical user interface.

It is understood that other configurations of the subject technology will become readily apparent to those skilled in the art from the following detailed description, wherein various configurations of the subject technology are shown and described by way of illustration. As will be realized, the subject technology is capable of other and different configurations and its several details are capable of modification in various other respects, all without departing from the scope of the subject technology. Accordingly, the drawings and detailed description are to be regarded as illustrative in nature and not as restrictive.

BRIEF DESCRIPTION OF THE DRAWINGS

Certain features of the subject technology are set forth in the appended claims. However, for purpose of explanation, several embodiments of the subject technology are set forth in the following figures.

FIG. 1 illustrates an example client-server network environment which provides for group conversation,

FIG. 2 illustrates an example peer-to-peer network environment which provides for group conversation.

FIG. 3 illustrates an example social network including social circles.

FIGS. 4A to 4C illustrate screen-shots of an example graphical user interface for participating in a group conversation.

FIG. 5 illustrates a screen-shot of an example graphical user interface for presenting profile information in the form of a hover card.

FIG. 6 illustrates a screen-shot of an example graphical user interface for presenting profile information in the "about" section of a full profile view.

FIG. 7 illustrates a screen-shot of an example graphical user interface for presenting profile information in the "photos" section of a full profile view.

FIG. 8 illustrates screen-shots of an example graphical user interface for a profile header.

FIGS. 9A and 9B illustrate screen-shots of an example graphical user interface for configuring conversation settings for a user.

FIG. 10 illustrates screen-shots of an example graphical user interface for displaying the status of messages.

FIG. 11 illustrates a screen-shot of an example graphical user interface for displaying activity messages within a group conversation.

FIGS. 12A and 12B illustrate screen-shots of an example graphical user interface for receiving a request for participation in a group conversation.

FIG. 13 illustrates a screen-shot of an example graphical user interface for notifying a user of a message within an existing conversation, when the user is not currently accessing the conversation.

FIG. 14 illustrates a process by which profile information is presented on an electronic device of a user.

FIG. 15 conceptually illustrates an electronic system with which some implementations of the subject technology are implemented.

#### DETAILED DESCRIPTION

The detailed description set forth below is intended as a description of various configurations of the subject technology and is not intended to represent the only configurations in which the subject technology may be practiced. The appended drawings are incorporated herein and constitute a part of the detailed description. The detailed description includes specific details for the purpose of providing a thorough understanding of the subject technology. However, it will be clear and apparent to those skilled in the art that the subject technology is not limited to the specific details set forth herein and may be practiced without these specific details. In some instances, well-known structures and components are shown in block diagram form in order to avoid obscuring the concepts of the subject technology.

As used herein, social circles are categories to which a user can assign their social networking contacts and better control the distribution and visibility of social networking messages. In accordance with the subject disclosure, a social circle is provided as a data set defining a collection of contacts that are associated with one another. As used herein, a social circle can be described from the perspective of an individual that is the center of a particular collection of socially interconnected people, or from the aggregate perspective of a collection of socially interconnected people. In some examples, a social circle can have narrowly defined boundaries, all of the members of the social circle may be familiar with one another, and permission may be required for a member to join a social circle. In accordance with the subject disclosure, a user of an electronic device may define a social circle, and the social circle, as a data set defining a collection of contacts, may reflect a real-life social circle of the user.

For example, a user of an electronic device may have different groups of friends, coworkers, and family, and there may be some overlap among those groups (i.e., a coworker who is also considered to be a friend, a family member who is also a coworker). Through the creation and use of social circles, the user can organize and categorize social networking contacts into various different groupings.

FIG. 1 illustrates an example client-server network environment which provides for group conversation. As noted above, group conversation allows for ongoing electronic conversation with a select group of people. During such a conversation, a user of an electronic device may wish to view profile information about another participant in the conversation. For example, the user may wish to see the name and contact information of the participant, or the most recent status message posted by the participant. In another example, the user may wish to view profile information while not even participating in a group conversation (e.g., when the user is viewing his/her list of contacts). Such display of profile information will be described in greater detail below, for example, with reference to FIGS. 5 to 8.

As can be seen in FIG. 1, a network environment 100 includes a number of electronic devices 102-106 communicably connected to a server 110 by a network 108. Server 110 includes a processing device 112 and a data store 114. Processing device 112 executes computer instructions stored in data store 114, for example, to assist in group conversation between electronic devices 102-106.

Users interacting with electronic devices 102-106 can participate in group conversation (e.g., using server 110), by

posting messages such as text communications (e.g., comments, replies, announcements, status updates), digital photos, videos, or other appropriate electronic information. In some example embodiments, information can be posted on a user's behalf by systems and/or services external to server 110. For example, the user may post a review of a movie to a movie review website, and with proper permissions that website may include the review in the group conversation on the user's behalf. In another example, a software application executing on a mobile device (e.g., electronic device 102), with proper permissions, may use global positioning system (GPS) capabilities to determine the user's location and automatically update the social network with the user's location (e.g., "At Home", "At Work", "In Los Angeles, Calif.>").

The posted messages can be formatted as text messages (e.g., SMS, MMS messages), email messages, instant messages, or other message formats for communication between electronic devices 102-106. For example, a communication message generated on electronic device 102 can correspond to Extensible Messaging and Presence Protocol (XMPP). The XMPP message can be received by a message service (not shown) and translated into an appropriate format for receipt by electronic devices 104-106. For example, the XMPP message can remain in XMPP, can be translated into an email, SMS, MMS or message via the message service, or can be translated into a proprietary message format via the message service. The translated message can then be forwarded to electronic devices 104-106.

Users interacting with electronic devices 102-106 can also define social circles to organize and categorize the user's relationships to other users within network 108. Examples of the creation and use of social circles are provided in the description of FIG. 3, and throughout the remainder of the subject disclosure.

In some example embodiments, electronic devices 102-106 can be computing devices such as laptop or desktop computers, smartphones, PDAs, portable media players, tablet computers, or other appropriate computing devices that can be used to for group conversation within a social network. In the example of FIG. 1, electronic device 102 is depicted as a smartphone, electronic device 104 is depicted as a desktop computer, and electronic device 106 is depicted as a PDA.

In some example aspects, server 110 can be a single computing device such as a computer server. In other embodiments, server 110 can represent more than one computing device working together to perform the actions of a server computer (e.g., cloud computing). Furthermore, network 108 can be a public communication network (e.g., the Internet, cellular data network, dialup modems over a telephone network) or a private communications network (e.g., private LAN, leased lines).

FIG. 2 illustrates an example peer-to-peer network environment which provides for group conversation. A network environment 200 includes a number of electronic devices 202-206 communicably connected to one another in a peer-to-peer manner over a network 208.

Users interacting with electronic devices 202-206 can participate in group conversation by posting messages, such as text communications (e.g., comments, replies, announcements, status updates), digital photos, videos, or other appropriate electronic information. In some example embodiments, information can be posted on a user's behalf by external systems and/or services. For example, the user may post a review of a movie to a movie review website, and with proper permissions that website may include the review in the group conversation on the user's behalf. In another example, a software application executing on a mobile device (e.g.,

electronic device **202**), with proper permissions, may use global positioning system (GPS) capabilities to determine the user's location and automatically update the social network with the user's location (e.g., "At Home", "At Work", "In Los Angeles, Calif.").

The posted messages can be formatted as text messages (e.g., SMS, MMS messages), email messages, instant messages, or other message formats for communication between electronic devices **202-206**. For example, a communication message generated on electronic device **202** can correspond to Extensible Messaging and Presence Protocol (XMPP). The XMPP message can be received by a message service (not shown) and translated into an appropriate format for receipt by electronic devices **204-206**. For example, the XMPP message can remain in XMPP, can be translated into an email, SMS, MMS or message via the message service, or can be translated into a proprietary message format via the message service. The translated message can then be forwarded to electronic devices **204-206**.

In the example peer-to-peer communication illustrated in FIG. 2, the logic for coordinating group conversation between electronic devices **202-206** can be included in electronic devices **202-206** themselves, for example, by transmitting conversation identifiers between electronic devices **202-206**. In addition, it is possible for electronic devices **202-206** to detect nearby conversations, and exchange messages and other information between participants of those conversations.

Users interacting with electronic devices **202-206** can also define social circles to organize and categorize the user's relationships to other users. Examples of the creation and use of social circles are provided in the description of FIG. 3, and throughout the remainder of the subject disclosure.

In some example embodiments, electronic devices **202-206** can be computing devices such as laptop or desktop computers, smartphones, personal digital assistants (PDAs), portable media players, tablet computers, or other appropriate computing devices that can be used for group conversation within a social network. In the example of FIG. 2, electronic device **202** is depicted as a smartphone, electronic device **204** is depicted as a desktop computer, and electronic device **206** is depicted as a PDA.

In some example aspects, network **208** can be a public communication network (e.g., the Internet, cellular data network, dialup modems over a telephone network) or a private communications network (e.g., private LAN, leased lines).

FIG. 3 illustrates an example of social circles for a user. User **302** can participate in different group conversations with different social circles. Such group conversation can occur within a client-server environment (e.g., the environment of FIG. 1) or within a peer-to-peer environment (e.g., the environment of FIG. 2). In the example of FIG. 3, user **302** has a number of contacts **304a-304h** with which user **302** can have some form of relationship (e.g., friends, coworkers, customers, teammates, clients, relatives, club members, classmates). User **302** can categorize contacts **304a-304h** by assigning them to one or more social circles, such as social circle **310**, social circle **330**, and social circle **330**.

In some example aspects, social circles **310-330** are groupings created by and may be known only to user **302** (e.g., contacts **304a**, **304b** may receive no indication that they are in user's **302** private social circle **310**). In other example aspects, social circles are groupings created by user **302** and may be known to user **302** as well as the contacts (e.g., contacts **304a**, **304b**) that are members of the social circle (e.g., contacts **304a**, **304b** receive an indication that they have been added to social circle **310**).

Social circles may be used to organize and categorize contacts **304a-304h** in ways that are relevant to user **302**. For example, user **302** may define social circles **310**, **320** and **330** corresponding to family, friends and co-workers, respectively.

When initiating a group conversation, user **302** can select a combination of individuals and social circles for participation in the group conversation, where the participants can share in viewing and posting messages within the group conversation.

Once a social circle is created, user **302** can add (or invite) other people to join the social circle. In some example aspects, user **302** can specify individuals from his group of contacts for inclusion in the social circle. In other example aspects, while participating in a group conversation, user **302** can form a new circle with the participants of the group conversation, or can modify an existing social circle by adding the participants of the group conversation to that social circle. Furthermore, participants selected by user **302** can automatically be included in a social circle, and these participants can be notified. Alternatively, in some examples, the selected participants can be invited to opt into the social circle, with only those who accept membership joining the group conversation.

In some example aspects, one or more default social circles can be provided or suggested to user **302** on his/her electronic device. For example, "Friends," "Family," and "Coworkers" social circles can automatically be provided in a user's profile. Other social circles can automatically be provided including, for example, an "Acquaintances" social circle and/or a "Just Following" social circle. Although default social circles can be automatically provided, it may be left to the user to actually populate the default social circles with contacts. For example, each of the default social circles may initially be empty of contacts, where the user populates each of the default social circles.

In some example aspects, one or more default social circles can be automatically generated based on the user's profile information. For example, with proper permissions, the user's profile may include demographic data (e.g., age), job data, and/or interests data (e.g., sports, hobbies). Through data mining techniques (e.g., clustering social circle creations over a threshold number of users) and user permission, it may be determined that users within a particular demographic typically create one or more particular types of social circles. By categorizing a user within a particular demographic, one or more particular default social circles can be suggested or automatically generated.

For example, if a particular user falls within a demographic that corresponds to a college student, a default "College Friends" social circle may be suggested to or automatically created for the user. Social circles can also be suggested or created based on interest data provided in a user's profile. For example, if a particular user's interests include skiing, a default "Ski Buddies" social circle may be suggested to or automatically created for the user.

In some example aspects, during a message write-time, a data set can be used for coordination of the group conversation. For example, the data set can be transmitted from the user's client device (e.g., electronic devices **102-106** of FIG. 1) to a distribution hub which can be provided at a server (e.g., server **110** of FIG. 1). In another example, the data set can be transmitted between client devices (e.g., electronic devices **202-206** of FIG. 2), where the data set is processed primarily at each of the client devices to coordinate group conversation.

The data set can include a plurality of data. For example, the data set can include content data (e.g., text, uniform resource indicator (URI)), timestamp data (e.g., a timestamp

indicating the time that the message was generated), distribution data (e.g., contacts and/or one or more social circles), and identification (ID)) data (e.g., an ID) assigned to the data set upon generation of the message).

In some example aspects, the distribution data is processed to provide an access control list (ACL) that specifies which contacts are participants in a group conversation. In the case of a client-server environment (e.g., the network environment of FIG. 1), a distribution hub can determine end points the data set is to be distributed to based on the ACL. For example, the set of participants determined based on the ACL and the ID of the message is written to a per user/view index at the distribution hub. When fetching messages to distribute to a user, the user/view index is accessed and the IDs of the various messages that the user is allowed to view are determined. The data sets are retrieved from a data store (e.g., data store 114 of FIG. 1) and are transmitted to the client device (e.g., electronic device 102-106 of FIG. 1) associated with the user. Alternatively, in the case of peer-to-peer communication (e.g., the network environment of FIG. 2), the logic for transmitting and receiving data sets can be included in the client devices themselves, for example, by using conversation identifiers on each of the client devices.

FIGS. 4A to 4C illustrate screen-shots of an example graphical user interface for participating in a group conversation. In some example aspects, the graphical user interface of FIG. 4A illustrates the conversations, including 1-1 and group conversations, that user 302 is currently a participant of. These conversations are presented in a message list 402. In this example, message list 402 indicates that user 302 is currently a participant in three conversations, one of which is a group conversation, and two of which are 1-1 conversations.

The graphical user interface of FIG. 4A further illustrates an updates section 404. Updates section 404 may provide updates for user 302, including new friends who are signed up for social circles. In addition, the graphical user interface of FIG. 4A may include an options section 406, for providing user 302 with options such as returning to a main menu, refreshing the screen and reviewing notifications. The graphical user interface may also provide user 302 with the option to select and access a particular conversation. In the example of FIG. 4B, user 302 selects the group conversation within message list 402.

With reference to FIG. 4B, the graphical user interface provides for presentation of a group conversation. As shown in FIG. 4B, the graphical user interface can include a collection of contact icons 412, which represents the participants of the group conversation. In some example aspects, the contact icons 412 can be digital photos of the participants they represent, arbitrary images, or placeholders (e.g., when the contact has no image associated with their account). In some example aspects, the collection of icons 412 appear in a row at the top of the graphical user interface. A scroll bar (not shown) may also be provided for user 302 to access additional contact icons that may not fit into the initial view.

The graphical user interface of FIG. 4B further illustrates a conversation thread 414, which provides a history of messages posted for the group conversation. For example, for each message in conversation thread 414, the content and identification of participant can be shown. In some example aspects, a timestamp (not shown) indicating the time that the message was sent can also be displayed.

The graphical user interface may also include a typing indicator 416 which indicates which one(s) of the participants are currently typing a message for inclusion in the conversation thread 414. In addition, the graphical user interface may

include a refresh button 420 for refreshing collection of contact icons 412 and/or conversation thread 414.

FIG. 4B further illustrates a message input box 418 for user 302 to enter and post new messages to conversation thread 414. In the event that user 302 selects to enter a new message (e.g., via input box 418), user 302 can be presented with a keyboard 422 for entering the message as shown in FIG. 4C.

The graphical user interface of FIG. 4B can also provide for an add participant button 424 for adding (or inviting) participants to a group conversation. FIG. 4B can further include a conversation settings button 426 to allow user 302 to change conversation settings, as described in further detail below with reference to FIG. 9B. The graphical user interface of FIG. 4B can also include a participant list button 428 for displaying the participants in a particular group conversation.

FIG. 5 illustrates a screen-shot of an example graphical user interface for presenting profile information in the form of a hover card. As noted above, user 302 may wish to view profile information about a particular one of his contacts. For example, during group conversation, user 302 may wish to receive profile information about a particular participant. User 302 may wish to see the name and contact information of the participant, or the most recent status message posted by the participant.

In the example of FIG. 5, user 302 may wish to see the profile information for a particular contact (e.g., "Adam Jones"). As such, the user may select this contact icon from the collection of contact icons 412. Profile information associated with the participant can be presented as a hover card 502, which is an overlay presented on top of the current graphical user interface display. In this regard, it should be noted that the display of profile information is not particular to the context of a group conversation. For example, hover card 412 can be pervasive in any place that a contact icon is shown (e.g., in the user's list of contacts, within a conversation thread, within other applications on the operating system of the electronic device). In the example of FIG. 5, the hover card can provide the name, GPS-location and recent status update of participant "Adam Jones."

It is also possible for user 302 to view the entire profile of a contact. As such, user 302 may be provided with different interfaces for either viewing the hover card or the full profile of a contact. For example, user 302 can initially be presented with a hover card view by clicking on a contact icon, and can be presented with a full profile for viewing by selecting the name portion within the hover card. Of course, other interfaces may be provided for presenting either a hover card or full profile view.

FIG. 6 illustrates a screen-shot of an example graphical user interface for presenting profile information in the "about" section of a full profile view. As noted above, user 302 may select to view a full profile of a contact, rather than a hover card. In some example aspects, the full profile view can provide for more comprehensive information about the selected contact.

In the example of FIG. 6, the full profile can be divided between an "about" section, a "posts" section and a "photos" section. In some embodiments, the full profile view may default to show the "about" section. To switch between these sections, user 302 can be provided with an about button 616, a posts button 618 and photos button 620. As shown in FIG. 6, the about section for a contact can include information such as a profile header 602, introductions 604, contact 606, location 608, personal life 610, work and education 612 and links 614. A scroll bar (not shown) may also be provided for user 302 to access information that may not fit into the initial view.

FIG. 7 illustrates a screen-shot of an example graphical user interface for presenting profile information in the “photos” section of a full profile view. In some embodiments, the photos section can display profile header 602 and a photos portion 702. Photos portion 702 may include, for example,

photos of the contact, profile photos and photos that the contact has posted.

FIG. 8 illustrates screen-shots of an example graphical user interface for a profile header. In this regard, it is possible for profile headers to be displayed in different manners. This may depend, for example, on whether the contact is a member of a social circle 320, or on permissions set by the contact. In the example of FIG. 8, profile header 602a corresponds to a contact sharing social circles with user 302, profile header 602b corresponds to a contact which does not share social circles with user 302, and profile header 602c corresponds to a contact for which social circle information is not provided (e.g., based on permissions set by the contact).

FIGS. 9A and 9B illustrate screen-shots of an example graphical user interface for configuring conversation settings for a user. Regarding FIG. 9A, the interface for a group conversation can include collection of contact icons 412, conversation thread 414, typing indicator 416, message input box 418, refresh button 420, add participant button 424 and participant list button 428.

The graphical user interface for the group conversation can further include a conversation settings button 426. This button can allow user 302 to change settings within a group conversation. In the example of FIG. 9B, user 302 is provided with a change picture option 902 for changing a picture associated with the group conversation (or with user 302), and a name option 904 for displaying and modifying (e.g., adding, deleting) the participants in the group conversation. The graphical user interface also provides for a message notification option 906 for opting into or out of receiving message notifications, as described below. In addition, the graphical user interface provides for a leave conversation option 908, which allows for removal of user 302 from the group conversation.

FIG. 10 illustrates screen-shots of an example graphical user interface for displaying the status of messages. As described above, it is possible to post messages, such as text (e.g., comments, replies, announcements, status updates), digital photos, videos, or other appropriate electronic information within conversation thread 414. Moreover, it is possible to display status information for items posted in conversation thread 414. In some example aspects, such status information can include a timestamp 1002 indicating when a message was posted, an indication 1004 that posting of a message failed, and an indication 1006 of the type of message that was sent (e.g., SMS, MMS).

FIG. 11 illustrates a screen-shot of an example graphical user interface for displaying activity messages within a group conversation. In addition to the messages submitted by participants (e.g., text, digital photos, videos), activity messages related to participants of a group conversation can appear in communication thread 414, with proper permissions. In the example of FIG. 11, these activity messages include an indication that certain participants have been added to the group conversation, that certain participants have left the conversation, and that certain participants are currently typing in the group conversation. Of course, it should be noted that other activities related to the participants of the conversation can be tracked with proper permission, and that corresponding messages can be included in conversation thread 414.

FIGS. 12A and 12B illustrate screen-shots of an example graphical user interface for receiving a request for participation in a group conversation. As described above, user 302 can

invite others (e.g., individuals, members of a social circle) to participate in a 1-1 or in a group conversation, User 302 can also be invited by other users to participate within a 1-1 or group conversation, and this conversation may be new or existing.

As noted above, user 302 can opt to automatically be joined into group conversation. In this case, user 302 can be presented with a notification that he/she is now a participant of a conversation. In other example aspects, user 302 can accept or decline participation in a conversation. Thus, when user 302 is selected by another user for inclusion in a group conversation, user 302 may be provided with a request to accept or decline participation.

In the example of FIG. 12A, a graphical user interface provides user 302 with the participant(s) 1200 in a conversation, and a conversation invite 1202 allowing user 302 to accept (e.g., “continue”) the conversation, or decline (e.g., “block”) the conversation. The conversation can correspond to a 1-1 conversation in which case one participant 1200 can be displayed, or can correspond to a group conversation in which case multiple participants 1200 can be displayed. In the event that user 302 accepts, a communication window can be displayed, as shown in FIG. 12B. In the example of FIG. 12B, the participant communicating with user 302 is not an existing contact, and user 302 is presented with an add to circles button 1204 for adding that participant to a social circle.

FIG. 13 illustrates a screen-shot of an example graphical user interface for notifying a user of a message within an existing conversation, when the user is not currently accessing the conversation. As described earlier with reference to FIG. 4A, it is possible for user 302 to be involved in multiple conversations, including 1-1 and group conversations. In the event that user 302 is not currently accessing a conversation (e.g., when the user has electronic device 102-106 or electronic device 202-206 in his/her pocket), the user can be notified, with proper permissions, of messages from any of his/her conversations.

In this regard, FIG. 13 illustrates a message notification 1302 alerting user 302 that a new message was posted within a group conversation of his “Friends” social circle. FIG. 13 further illustrates interface elements 1304, which may correspond to an application home screen on the electronic device. Of course, message notification 1302 is not limited to presentation within a home screen, and can be displayed in other scenarios when the user is not currently accessing a particular conversation. In some example aspects, message notification 1302 can be accompanied by an optional audio or vibrate alert to notify user 302 of the new message.

FIG. 14 illustrates a process by which a group conversation is presented on an electronic device of a user. The profile information is associated with a contact of the user. At step 1402, a contact icon is displayed on a graphical user interface of the electronic device. The contact icon corresponds to a contact of the user. At step 1404, user input which specifies selection of the contact icon is received. At step 1406, profile information, which is obtained from a profile associated with the contact corresponding to the selected contact icon, is displayed on the graphical user interface.

Many of the above-described features and applications are implemented as software processes that are specified as a set of instructions recorded on a computer readable storage medium (also referred to as computer readable medium). When these instructions are executed by one or more processing unit(s) (e.g., one or more processors, cores of processors, or other processing units), they cause the processing unit(s) to perform the actions indicated in the instructions. Examples of computer readable media include, but are not limited to,

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CD-ROMs, flash drives, RAM chips, hard drives, EPROMs, etc. The computer readable media does not include carrier waves and electronic signals passing wirelessly or over wired connections.

In this specification, the term “software” is meant to include firmware residing in read-only memory or applications stored in magnetic storage, which can be read into memory for processing by a processor. Also, in some implementations, multiple software aspects of the subject disclosure can be implemented as sub-parts of a larger program while remaining distinct software aspects of the subject disclosure. In some implementations, multiple software aspects can also be implemented as separate programs. Finally, any combination of separate programs that together implement a software aspect described here is within the scope of the subject disclosure. In some implementations, the software programs, when installed to operate on one or more electronic systems, define one or more specific machine implementations that execute and perform the operations of the software programs.

A computer program (also known as a program, software, software application, script, or code) can be written in any form of programming language, including compiled or interpreted languages, declarative or procedural languages, and it can be deployed in any form, including as a stand alone program or as a module, component, subroutine, object, or other unit suitable for use in a computing environment. A computer program may, but need not, correspond to a file in a file system. A program can be stored in a portion of a file that holds other programs or data (e.g., one or more scripts stored in a markup language document), in a single file dedicated to the program in question, or in multiple coordinated files (e.g., files that store one or more modules, sub programs, or portions of code). A computer program can be deployed to be executed on one computer or on multiple computers that are located at one site or distributed across multiple sites and interconnected by a communication network.

FIG. 15 conceptually illustrates an electronic system with which some implementations of the subject technology are implemented. Electronic system 1500 can be a computer, phone, PDA, or any other sort of electronic device. Such an electronic system includes various types of computer readable media and interfaces for various other types of computer readable media. Electronic system 1500 includes a bus 1508, processing unit(s) 1512, a system memory 1504, a read-only memory (ROM) 1510, a permanent storage device 1502, an input device interface 1514, an output device interface 1506, and a network interface 1516.

Bus 1508 collectively represents all system, peripheral, and chipset buses that communicatively connect the numerous internal devices of electronic system 1500. For instance, bus 1508 communicatively connects processing unit(s) 1512 with ROM 1510, system memory 1504, and permanent storage device 1502.

From these various memory units, processing unit(s) 1512 retrieves instructions to execute and data to process in order to execute the processes of the subject disclosure. The processing unit(s) can be a single processor or a multi-core processor in different implementations.

ROM 1510 stores static data and instructions that are needed by processing unit(s) 1512 and other modules of the electronic system. Permanent storage device 1502, on the other hand, is a read-and-write memory device. This device is a non-volatile memory unit that stores instructions and data even when electronic system 1500 is off. Some implementations of the subject disclosure use a mass-storage device (such

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as a magnetic or optical disk and its corresponding disk drive) as permanent storage device 1502.

Other implementations use a removable storage device (such as a floppy disk, flash drive, and its corresponding disk drive) as permanent storage device 1502. Like permanent storage device 1502, system memory 1504 is a read-and-write memory device. However, unlike storage device 1502, system memory 1504 is a volatile read-and-write memory, such as a random access memory. System memory 1504 stores some of the instructions and data that the processor needs at runtime. In some implementations, the processes of the subject disclosure are stored in system memory 1504, permanent storage device 1502, and/or ROM 1510. For example, the various memory units include instructions for processing multimedia items in accordance with some implementations. From these various memory units, processing unit(s) 1512 retrieves instructions to execute and data to process in order to execute the processes of some implementations.

Bus 1508 also connects to input and output device interfaces 1514 and 1506. Input device interface 1514 enables the user to communicate information and select commands to the electronic system. Input devices used with input device interface 1514 include, for example, alphanumeric keyboards and pointing devices (also called “cursor control devices”). Output device interfaces 1506 enables, for example, the display of images generated by the electronic system 1500. Output devices used with output device interface 1506 include, for example, printers and display devices, such as cathode ray tubes (CRT) or liquid crystal displays (LCD). Some implementations include devices such as a touchscreen that functions as both input and output devices.

Finally, as shown in FIG. 15, bus 1508 also couples electronic system 1500 to a network (not shown) through a network interface 1516. In this manner, the computer can be a part of a network of computers (such as a local area network (“LAN”), a wide area network (“WAN”), or an Intranet, or a network of networks, such as the Internet. Any or all components of electronic system 1500 can be used in conjunction with the subject disclosure.

These functions described above can be implemented in digital electronic circuitry, in computer software, firmware or hardware. The techniques can be implemented using one or more computer program products. Programmable processors and computers can be included in or packaged as mobile devices. The processes and logic flows can be performed by one or more programmable processors and by one or more programmable logic circuitry. General and special purpose computing devices and storage devices can be interconnected through communication networks.

Some implementations include electronic components, such as microprocessors, storage and memory that store computer program instructions in a machine-readable or computer-readable medium (alternatively referred to as computer-readable storage media, machine-readable media, or machine-readable storage media). Some examples of such computer-readable media include RAM, ROM, read-only compact discs (CD-ROM), recordable compact discs (CD-R), rewritable compact discs (CD-RW), read-only digital versatile discs (e.g., DVD-ROM, dual-layer DVD-ROM), a variety of recordable/rewritable DVDs (e.g., DVD-RAM, DVD-RW, DVD+RW, etc.), flash memory (e.g., SD cards, mini-SD cards, micro-SD cards, etc.), magnetic and/or solid state hard drives, read-only and recordable Blu-Ray® discs, ultra density optical discs, any other optical or magnetic media, and floppy disks. The computer-readable media can store a computer program that is executable by at least one processing unit and includes sets of instructions for performing various

operations. Examples of computer programs or computer code include machine code, such as is produced by a compiler, and files including higher-level code that are executed by a computer, an electronic component, or a microprocessor using an interpreter.

While the above discussion primarily refers to microprocessor or multi-core processors that execute software, some implementations are performed by one or more integrated circuits, such as application specific integrated circuits (ASICs) or field programmable gate arrays (FPGAs). In some implementations, such integrated circuits execute instructions that are stored on the circuit itself.

As used in this specification and any claims of this application, the terms “computer”, “server”, “processor”, and “memory” all refer to electronic or other technological devices. These terms exclude people or groups of people. For the purposes of the specification, the terms display or displaying means displaying on an electronic device. As used in this specification and any claims of this application, the terms “computer readable medium” and “computer readable media” are entirely restricted to tangible, physical objects that store information in a form that is readable by a computer. These terms exclude any wireless signals, wired download signals, and any other ephemeral signals.

To provide for interaction with a user, implementations of the subject matter described in this specification can be implemented on a computer having a display device, e.g., a CRT (cathode ray tube) or LCD (liquid crystal display) monitor, for displaying information to the user and a keyboard and a pointing device, e.g., a mouse or a trackball, by which the user can provide input to the computer. Other kinds of devices can be used to provide for interaction with a user as well; for example, feedback provided to the user can be any form of sensory feedback, e.g., visual feedback, auditory feedback, or tactile feedback; and input from the user can be received in any form, including acoustic, speech, or tactile input. In addition, a computer can interact with a user by sending documents to and receiving documents from a device that is used by the user; for example, by sending web pages to a web browser on a user’s client device in response to requests received from the web browser.

Embodiments of the subject matter described in this specification can be implemented in a computing system that includes a back end component, e.g., as a data server, or that includes a middleware component, e.g., an application server, or that includes a front end component, e.g., a client computer having a graphical user interface or a Web browser through which a user can interact with an implementation of the subject matter described in this specification, or any combination of one or more such back end, middleware, or front end components. The components of the system can be interconnected by any form or medium of digital data communication, e.g., a communication network. Examples of communication networks include a local area network (“LAN”) and a wide area network (“WAN”), an inter-network (e.g., the Internet), and peer-to-peer networks (e.g., ad hoc peer-to-peer networks).

The computing system can include clients and servers. A client and server are generally remote from each other and typically interact through a communication network. The relationship of client and server arises by virtue of computer programs running on the respective computers and having a client-server relationship to each other. In some embodiments, a server transmits data (e.g., an HTML page) to a client device (e.g., for purposes of displaying data to and receiving user input from a user interacting with the client device). Data

generated at the client device (e.g., a result of the user interaction) can be received from the client device at the server.

It is understood that any specific order or hierarchy of steps in the processes disclosed is an illustration of exemplary approaches. Based upon design preferences, it is understood that the specific order or hierarchy of steps in the processes may be rearranged, or that all illustrated steps be performed. Some of the steps may be performed simultaneously. For example, in certain circumstances, multitasking and parallel processing may be advantageous. Moreover, the separation of various system components in the embodiments described above should not be understood as requiring such separation in all embodiments, and it should be understood that the described program components and systems can generally be integrated together in a single software product or packaged into multiple software products.

The previous description is provided to enable any person skilled in the art to practice the various aspects described herein. Various modifications to these aspects will be readily apparent to those skilled in the art, and the generic principles defined herein may be applied to other aspects. Thus, the claims are not intended to be limited to the aspects shown herein, but is to be accorded the full scope consistent with the language claims, wherein reference to an element in the singular is not intended to mean “one and only one” unless specifically so stated, but rather “one or more.” Unless specifically stated otherwise, the term “some” refers to one or more. Pronouns in the masculine (e.g., his) include the feminine and neuter gender (e.g., her and its) and vice versa. Headings and subheadings, if any, are used for convenience only and do not limit the subject disclosure.

A phrase such as an “aspect” does not imply that such aspect is essential to the subject technology or that such aspect applies to all configurations of the subject technology. A disclosure relating to an aspect may apply to all configurations, or one or more configurations. A phrase such as an aspect may refer to one or more aspects and vice versa. A phrase such as a “configuration” does not imply that such configuration is essential to the subject technology or that such configuration applies to all configurations of the subject technology. A disclosure relating to a configuration may apply to all configurations, or one or more configurations. A phrase such as a configuration may refer to one or more configurations and vice versa.

The word “exemplary” is used herein to mean “serving as an example or illustration.” Any aspect or design described herein as “exemplary” is not necessarily to be construed as preferred or advantageous over other aspects or designs.

All structural and functional equivalents to the elements of the various aspects described throughout this disclosure that are known or later come to be known to those of ordinary skill in the art are expressly incorporated herein by reference and are intended to be encompassed by the claims. Moreover, nothing disclosed herein is intended to be dedicated to the public regardless of whether such disclosure is explicitly recited in the claims.

What is claimed is:

1. A machine-implemented method for presenting profile information on an electronic device of a user, the profile information being associated with a contact of the user, the method comprising:

comparing profile information of the user to profile information of other users;  
automatically creating a preset group of contacts for the user based on the comparison, the preset group of contacts having profile information that at least partially matches the profile information of the user;

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receiving first user input specifying that the preset group be included within a plurality of participants of a group conversation, the group conversation for sharing communication messages among the plurality of participants;

including, in response to the received first user input, the preset group within the plurality of participants of the group conversation;

displaying, on a graphical user interface of the electronic device, a plurality of contact icons, each contact icon respectively corresponding to one of the plurality of participants;

receiving second user input which specifies selection of a contact icon from among the plurality of contact icons; and

displaying profile information of the participant corresponding to the selected contact icon on the graphical user interface in response to the received second user input.

2. The method of claim 1, wherein the profile information of the participant corresponding to the selected contact icon is displayed in at least one of a hover card or a full profile view, wherein the hover card is presented as an overlay on top of the current display on the graphical user interface, and wherein the full profile view is presented as a separate display on the graphical user interface.

3. The method of claim 1, wherein the full profile view includes an about section with general information of the contact, a photos section with digital photos of the contact and a posts section comprising posts submitted by the contact.

4. The method of claim 1, wherein the graphical user interface provides for user selection between the hover card and the full profile view.

5. The method of claim 1, wherein the profile information of the participant corresponding to the selected contact icon is obtained from a server storing profiles for contacts of the user.

6. The method of claim 1, wherein the profile information of the participant corresponding to the selected contact icon is obtained from storage on the electronic device.

7. The method of claim 1, wherein the profile information of the participant corresponding to the selected contact icon is requested and obtained from a device of the contact.

8. A system for presenting profile information on an electronic device of a user, the system comprising:

one or more processors; and  
a machine-readable medium comprising instructions stored therein, which when executed by the processors, cause the processors to perform operations comprising:  
comparing profile information of the user to profile information of other users;

automatically creating a preset group of contacts for the user based on the comparison, the preset group of contacts having profile information that at least partially matches the profile information of the user;

receiving first user input specifying that the preset group be included within a plurality of participants of a group conversation, the group conversation for sharing communication messages among the plurality of participants;

including, in response to the received first user input, the preset group within the plurality of participants of the group conversation;

displaying a plurality of contact icons on a graphical user interface of the electronic device, each contact icon respectively corresponding to one of the plurality of participants;

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receiving second user input which specifies selection of a contact icon from among the plurality of contact icons; and

displaying profile information of the participant respectively corresponding to the selected contact icon on the graphical user interface in response to the received second user input.

9. The system of claim 8, wherein the profile information of the participant corresponding to the selected contact icon is displayed in at least one of a hover card or a full profile view, wherein the hover card is presented as an overlay on top of the current display on the graphical user interface, and wherein the full profile view is presented as a separate display on the graphical user interface.

10. The system of claim 8, wherein the full profile view includes an about section with general information of the contact, a photos section with digital photos of the contact and a posts section comprising posts submitted by the contact.

11. The system of claim 8, wherein the graphical user interface provides for user selection between the hover card and the full profile view.

12. The system of claim 8, wherein the profile information of the participant corresponding to the selected contact icon is obtained from a server storing profiles for contacts of the user.

13. The system of claim 8, wherein the profile information of the participant corresponding to the selected contact icon is obtained from storage on the electronic device.

14. The system of claim 8, wherein the profile information of the participant corresponding to the selected contact icon is requested and obtained from a device of the contact.

15. A machine-readable medium comprising instructions stored therein, which when executed by a machine, cause the machine to perform operations comprising:

comparing profile information of the user to profile information of other users;

automatically creating a preset group of contacts for the user based on the comparison, the preset group of contacts having profile information that at least partially matches the profile information of the user;

receiving first user input specifying that the preset group be included within a plurality of participants of a group conversation, the group conversation for sharing communication messages among the plurality of participants;

including, in response to the received first user input, the preset group within the plurality of participants of the group conversation;

displaying, on a graphical user interface of an electronic device of the user, a plurality of contact icons, each contact icon respectively corresponding to one of the plurality of participants;

receiving second user input which specifies selection of a contact icon from among the plurality of contact icons; and

displaying profile information of the participant corresponding to the selected contact icon on the graphical user interface in response to the received second user input.

16. The machine-readable medium of claim 15, wherein the profile information of the participant corresponding to the selected contact icon is displayed in at least one of a hover card or a full profile view, wherein the hover card is presented as an overlay on top of the current display on the graphical user interface, wherein the full profile view is presented as a separate display on the graphical user interface, and wherein the full profile view includes an about section with general

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information of the contact, a photos section with digital photos of the contact and a posts section comprising posts submitted by the contact.

17. The machine-readable medium of claim 16, wherein the graphical user interface provides for user selection between the hover card and the full profile view.

18. The machine-readable medium of claim 15, wherein the profile information of the participant corresponding to the selected contact icon is obtained from a server storing profiles for contacts of the user.

19. The machine-readable medium of claim 15, wherein the profile information of the participant corresponding to the selected contact icon is obtained from storage on the electronic device.

20. The machine-readable medium of claim 15, wherein the profile information of the participant corresponding to the selected contact icon is requested and obtained from a device of the contact.

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21. The method of claim 3, wherein the full profile view further includes a first graphical component associated with the about section for switching to display of the general information of the contact, a second graphical component associated with the photos section for switching to display of the digital photos of the contact, and a third graphical component associated with the posts section for switching to display of the posts submitted by the contact.

22. The method of claim 1, further comprising:  
displaying a graphical component for creating a second preset group of contacts which includes all of the participants in the group conversation;  
receiving third user input via the graphical component; and  
creating, in response to the received third user input, the second preset group of contacts which includes all of the participants in the group conversation.

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