



(51) International Patent Classification:
H04W 68/00 (2009.01) *G06F 17/30* (2006.01)

(21) International Application Number:
PCT/IB2009/006931

(22) International Filing Date:
23 September 2009 (23.09.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/236,242 23 September 2008 (23.09.2008) US

(71) Applicant (for all designated States except US): **NOKIA CORPORATION** [FI/FI]; Keilalahdentie 4, FIN-02150 Espoo (FI).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BOSTROM, Jani, Petri** [FI/FI]; Tattariharjuntie 14 C 1, FIN-00700 Helsinki (FI). **KELTANEN, Matti** [FI/FI]; Pietarinkatu 15 B 58, FIN-00140 Helsinki (FI).

(74) Agent: **NOKIA CORPORATION**; c/o Nokia Inc., IP Docketing, 6021 Connection Drive, MS 2-5-520, Irving, TX 75039 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM,

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR DISPLAYING UPDATED CONTACTS

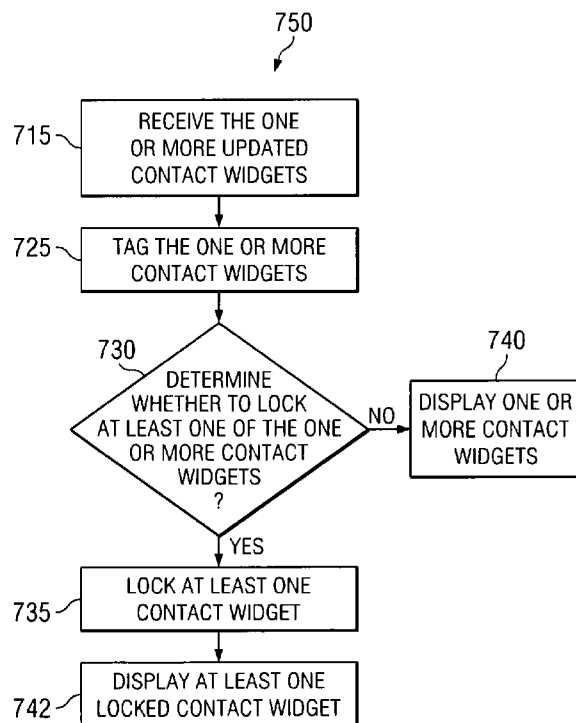


FIG. 7B

(57) Abstract: In accordance with an example embodiment of the present invention, an electronic device, server or service may update at least one contact widget in real time. Further, the electronic device, server or service may display the at least one contact widget.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, **Published:**
ML, MR, NE, SN, TD, TG).

— *with international search report (Art. 21(3))*

METHOD AND APPARATUS FOR DISPLAYING UPDATED CONTACTS

TECHNICAL FIELD

The present application relates generally to a method and apparatus for displaying updated contacts.

5 BACKGROUND

A user may use an electronic device and/or a server to communicate with friends, family, or other types of contacts. The electronic device and/or server may provide a user with features to update contact information. The electronic device and/or server, however, are still limited.

10 SUMMARY

In accordance with an example embodiment of the present invention, an apparatus comprises a processor configured to update at least one contact widget in real time, and a user interface configured to display at least one contact widget.

15 In accordance with another example embodiment of the present invention, a method comprises updating at least one contact widget in real time and displaying the at least one contact widget.

BRIEF DESCRIPTION OF THE DRAWINGS

20 For a more complete understanding of example embodiments of the present invention, reference is now made to the following descriptions taken in connection with the accompanying drawings in which:

FIGURE 1 is a block diagram depicting an electronic device operating in accordance with an example embodiment of the invention;

25 FIGURE 2 is a block diagram depicting a network for updating contacts in accordance with an example embodiment of the invention;

FIGURE 3 is a screen view depicting a contact widget with contact detail in accordance with an example embodiment of the invention;

FIGURE 4 is a screen view depicting contact widgets in a screen saver view in accordance with an example embodiment of the invention;

30 FIGURE 5 is a screen view depicting contact widgets in a grid view in accordance with an example embodiment of the invention;

FIGURE 6 is a screen view depicting a contact widget in a stacked view in accordance with an example embodiment of the invention.

35 FIGURE 7A is a flow diagram depicting an example method for transferring one or more updated contacts in accordance with an example embodiment of the invention;

FIGURE 7B is a flow diagram depicting an example method for displaying one or more updated contacts in accordance with an example embodiment of the invention.

DETAILED DESCRIPTION OF THE DRAWINGS

5 An example embodiment of the present invention and its potential advantages are best understood by referring to FIGURES 1 through 7 of the drawings.

FIGURE 1 is a block diagram depicting an electronic device 100 operating in accordance with an example embodiment of the invention. In an example embodiment, an electronic device 100 may comprise at least one antenna 12 in communication with a transmitter 14, a receiver 16,
10 and/or the like. The electronic device 100 may further comprise a processor 20 or other processing component. The processor 20 may provide at least one signal to the transmitter 14 and may receive at least one signal from the receiver 16. In an embodiment, the electronic device 100 may also comprise a user interface comprising one or more input or output devices, such as a conventional earphone or speaker 24, a ringer 22, a microphone 26, a display 28, and/or the like.
15 In an embodiment, the one or more output devices of the user interface may be coupled to the processor 20.

In an example embodiment, the user interface may allow the electronic device 100 to receive or transmit data. For example, the user interface may comprise any of a number of devices configured to receive data, such as a keypad 30, a touch display, other input device,
20 and/or the like. In an embodiment, the keypad 30 may comprise the conventional numeric, e.g., 0-9, and/or related keys, e.g., #, *, other hard and/or soft keys, and/or the like to operate the electronic device 100. In an alternative embodiment, the keypad 30 may comprise a conventional QWERTY keypad arrangement. Further, the keypad 30 may also comprise various soft keys with associated features. If desired, the electronic device 100 may comprise a user interface device,
25 such as a joystick or the like.

In an embodiment, the electronic device 100 may also comprise a battery 34, such as a vibrating battery pack, for powering various circuits to operate the electronic device 100. Further, the vibrating battery pack may also provide mechanical vibration as a detectable output. In an embodiment, the electronic device 100 may further comprise a user identity module (UIM) 38. In
30 one embodiment, the UIM 38 may be a memory device comprising a processor. The UIM 38 may comprise, for example, a subscriber identity module (SIM), a universal integrated circuit card (UICC), a universal subscriber identity module (USIM), a removable user identity module (R-UIM), and/or the like. Further, the UIM 38 may store one or more information elements related to a subscriber, such as a mobile subscriber.

35 In an embodiment, the electronic device 100 may comprise memory. For example, the electronic device 100 may comprise volatile memory 40, such as random access memory (RAM). Volatile memory 40 may comprise a cache area for the temporary storage of data. Further, the

electronic device 100 may also comprise non-volatile memory 42, which may be embedded and/or may be removable. The non-volatile memory 42 may also comprise an electrically erasable programmable read only memory (EEPROM), flash memory, and/or the like.

5 In an embodiment, the electronic device 100 may use memory to store any of a number of pieces of information and/or data to implement one or more features of the electronic device 100. Further, the memory may comprise an identifier, such as international mobile equipment identification (IMEI) code, capable of uniquely identifying the electronic device 100. The memory may store one or more instructions for determining cellular identification information based at least in part on the identifier. For example, the processor 20, using the stored
10 instructions, may determine an identity, e.g., cell id identity or cell id information, of a communication with the electronic device 100.

In an embodiment, the processor 20 of the electronic device 100 may comprise circuitry for implementing audio feature, logic features, and/or the like. For example, the processor 20 may comprise a digital signal processor device, a microprocessor device, a digital to analog
15 converter, other support circuits, and/or the like. In an embodiment, control and signal processing features of the processor 20 may be allocated between devices, such as the devices describe above, according to their respective capabilities. Further, the processor 20 may also comprise an internal voice coder and/or an internal data modem. Further still, the processor 20 may comprise features to operate one or more software programs. For example, the processor 20 may be
20 capable of operating a software program for connectivity, such as a conventional Internet browser. Further, the connectivity program may allow the electronic device 100 to transmit and receive Internet content, such as location-based content, other web page content, and/or the like. In an embodiment, the electronic device 100 may use a wireless application protocol (WAP), hypertext transfer protocol (HTTP), file transfer protocol (FTP) and/or the like to transmit and/or receive the
25 Internet content.

In an embodiment, the electronic device 100 may be capable of operating in accordance with any of a number of a first generation communication protocol, a second generation communication protocol, a third generation communication protocol, a fourth generation communication protocol, and/or the like. For example, the electronic device 100 may be capable
30 of operating in accordance with second generation (2G) communication protocols IS-136, time division multiple access (TDMA), global system for mobile communication (GSM), IS-95 code division multiple access (CDMA), and/or the like. Further, the electronic device 100 may be capable of operating in accordance with third-generation (3G) communication protocols, such as Universal Mobile Telecommunications System (UMTS), CDMA2000, wideband CDMA
35 (WCDMA), time division-synchronous CDMA (TD-SCDMA), and/or the like. Further still, the electronic device 100 may also be capable of operating in accordance with 3.9 generation (3.9G) wireless communication protocols, such as Evolved Universal Terrestrial Radio Access Network

(E-UTRAN) or the like, or wireless communication projects, such as long term evolution (LTE) or the like. Still further, the electronic device 100 may be capable of operating in accordance with fourth generation (4G) communication protocols.

5 In an alternative embodiment, the electronic device 100 may be capable of operating in accordance with a non-cellular communication mechanism. For example, the electronic device 100 may be capable of communication in a wireless local area network (WLAN), other communication networks, and/or the like. Further, the electronic device 100 may communicate in accordance with techniques, such as radio frequency (RF), infrared (IrDA), any of a number of WLAN techniques. For example, the electronic device 100 may communicate using one or more
10 of the following WLAN techniques: IEEE 802.11, e.g., 802.11a, 802.11b, 802.11g, 802.11n, and/or the like. Further, the electronic device 100 may also communicate, via a world interoperability, to use a microwave access (WiMAX) technique, such as IEEE 802.16, and/or a wireless personal area network (WPAN) technique, such as IEEE 802.15, Bluetooth (BT), ultra wideband (UWB), and/or the like.

15 It should be understood that using the communications protocols described above may use signals. The signals may comprise signaling information in accordance with the air interface standard of the applicable cellular system, user speech, received data, user generated data, and/or the like. In an embodiment, the electronic device 100 may be capable of operating with one or more air interface standards, communication protocols, modulation types, access types, and/or the
20 like. It should be further understood that the electronic device 100 is merely illustrative of one type of electronic device that would benefit from embodiments of the invention and, therefore, should not be taken to limit the scope of embodiments of the invention.

While embodiments of the electronic device 100 are illustrated and will be hereinafter described for purposes of example, other types of electronic devices, such as a portable digital
25 assistant (PDA), a pager, a mobile television, a gaming device, a camera, a video recorder, an audio player, a video player, a radio, a mobile telephone, a portable computer device, a global positioning system (GPS) device, a GPS navigation device, a GPS system, a mobile computer, a browsing device, an electronic book reader, a combination thereof, and/or the like, may be used. While several embodiments of the invention may be performed or used by the electronic device
30 100, embodiments may also be employed by a server, a service, a combination thereof, and/or the like.

FIGURE 2 is a block diagram depicting a network for updating contacts in accordance with an example embodiment of the invention. In an example embodiment, electronic devices
200, 202 may be in communication with a user platform 247, via a network, for example Internet
35 207. Further, the electronic devices 200, 202 may comprise a user interface, such as user interface 215, a communication interface 220, and/or a processor.

In an example embodiment, a processor, such as processor 20 of FIGURE 1, may be configured to execute instructions stored in a memory device of the electronic device 200, such as memory devices 40, 42 of FIGURE 1. In an embodiment, the processor may be a microprocessor, various other processing elements, such as an integrated circuit, and/or the like. For example, the processor may be an application specific integrated circuit (ASIC), a field programmable gate array (FPGA), and/or the like.

In an embodiment, the memory device may be configured to buffer input data for processing by the processor. In an alternative embodiment, the memory device may be configured to store instructions for execution by the processor. In another alternative embodiment, the memory device may be one of a plurality of databases. Further, the memory device may store at least one contact widget in real time or otherwise dynamic manner. In an embodiment, the at least one contact widget may comprise one or more of the following information: a mobile number, a name, a short message service contact, a multimedia messaging service contact, an email address, a chat identifier, a location, an Internet protocol address, a voice over Internet protocol client, user profile information, one or more shared files, e.g., documents, photos, media content, and/or the like, or combination thereof, and/or the like. In an embodiment, a widget may be an element of a graphical user interface (GUI). Further, the widget may comprise contact information.

In an example embodiment, user platform 247 may be in communication with electronic devices 200, 202. In an example embodiment, the user platform 247 may comprise one or more services 285, a contacts server 242, and/or an application program interface (API) 280. For example, the contacts server 242 may store one or more contact widgets. In an embodiment, the contacts server 242 may be a web server, database server, file server, and/or the like. Further, the contacts server 242 may comprise a memory device, a processor, and/or a communication interface for communicating over the Internet 207 to, for example communication interface 220 of the electronic device 200.

In an embodiment, the electronic device 200 may use the communication interface 220 to communicate with the contacts server 242, a user platform 247, and/or external services 270 via a network, such as Internet 207. For example, the communication interface 220 may be configured to receive at least one updated contact widget from a server, such as user platform 247, service 285, external services 270, and/or the like. Further, the communication interface 220 may transfer the at least one updated contact widget to electronic device 200 and/or electronic device 202 for synchronization. In an alternative embodiment, the electronic device 200 may communicate or receive the updated contact widget, via the API 280, to the contacts server 242, services 285, external services 270, and/or the like via the Internet 207.

In an embodiment, at least one contact widget may be synchronized between one of the electronic device 200, 202 and the user platform 247 in real time. For example, the contacts

server 242 may be configured to synchronize the at least one contact widget when a contact widget has been changed. Further, the contacts server 242 may be configured to update the at least one contact widget in real time. For example, if one contact widget has changed on the electronic device 200, the contacts server 242 may synchronize the at least one contact widget
5 between the contacts server 242 and the electronic device 200 in real time, e.g., as the update occurs. In another embodiment, the services 285 may be configured to synchronize the at least one contact widget when a contact widget has been changed. Further, the services 285 may be configured to update the at least one contact widget in real time. For example, if one contact widget has changed on the contacts server 242, the electronic device 200, or services 285 may
10 synchronize the at least one contact widget between the contacts server 242, services 285, and/or the electronic device 200 in real time. In this way, the electronic device 200, contacts server 242, and/or services 285 maintain substantially the same contact widgets in real time.

In an embodiment, the user interface 215 of the electronic device 200 may be configured to display the at least one contact widget based at least in part on tagging by the processor. In an
15 embodiment, the processor may tag at least one contact widget to be displayed. In an example embodiment, the processor may be configured to tag the at least one contact widget based at least in part on frequency of mobile communication, a group, and/or the like, between the apparatus and a contacts server 242, service, and/or the like. The user interface 215 may be configured to display each tagged contact widget. For example, the user interface 215 may be configured to
20 display the at least one contact widget based at least in part on a tag, e.g., widgets tagged based on frequency of mobile communication. The mobile communication may be at least one of the following: an exchange of short message service, an exchange of multimedia messaging service, a chat, an email, a share of media, a share of location, a game interaction, a combination thereof, and/or the like.

In an example embodiment, the processor may be configured to tag the at least one
25 contact widget based at least in part on the number of mobile communications between the contact and the electronic device 200. In another alternative embodiment the processor may be configured to tag at least one of the contact widgets based at least in part on a group or community of contact widgets. For example, the processor may group contact widgets by a
30 category, such as home, work, and/or the like. In an embodiment, the processor may allow a user to define one or more groups. In this embodiment, the user interface 215 may display the one or more contacts based at least in part on the group.

In an alternative embodiment, the processor may be configured to tag at least one of the at
least one contact widget based at least in part on a calendar entry. In an embodiment, the
35 processor may tag at least one contact widget based on an upcoming meeting in a calendar entry. In an alternative embodiment, the processor may consider the priority of the meeting or the like. In yet another alternative embodiment, the processor may be configured to tag a user for display

as a contact based at least in part on a calendar entry. For example, the processor may tag the user for display for two days, e.g., the meeting period and the day after for follow up discussion.

It should be understood that a tag may provide a unique representation to the contact widget to indicate the at least one contact widget may be displayed. It should be further

5 understood that the processor may be configured to lock a status of at least one contact widget on the user interface. In an embodiment, the user interface will display the one or more locked contact widgets regardless of the tag.

In an embodiment, the user platform 247 may be used to facilitate storing, retrieving, computing, transmitting, receiving, and/or the like, at least one contact widget. Further, the user
10 platform 247 may be embodied as an electronic device, such as the electronic device 100 of FIGURE 1, the electronic device 200, the electronic device 202, and/or the like. The user platform 247 may also be configured to communicate with one or more users using the contact widgets. For example, the user platform 247 may be configured to allow a user of electronic device 200 to contact a second user via a communication, messaging system, communications
15 protocol, and/or the like, e.g., emails, multimedia messaging service (MMS), short message service (SMS) messages, phone calls, and/or the like, using contact information in the contact widget. It should be understood that MMS may be a messaging system, which may allow a user to send messages comprising multimedia objects, e.g., images, audio, video, rich text. Further, a SMS may be a communications protocol to allow the interchange of short text messages between
20 electronic devices.

FIGURE 3 is a screen view depicting a contact widget 350 with contact detail 345 in accordance with an example embodiment of the invention. In an example embodiment, the user interface 340 may be configured to display information for the contact widget 350 in real time, e.g., based at least in part on updates. For example, the user interface 340 may display the contact
25 widget 350 with contact detail 345 if the contact widget 350 is updated on a contacts server, an electronic device, a service, and/or the like. Further, the user interface 340 may comprise any number of keys, such as an add number key 344, an update number key 346, always update key 348, and/or the like.

In an embodiment, the add number key 344 may be configured to add a new number 354
30 to the contact detail 345. The add number key 344 may be useful, for example, when a user receives an indication that a contact has updated their number. Further, an update number key 346 may be configured to update an old number 352 of the contact detail 345. For example, by replacing the old number 352 with the new number 354 a user of the user interface 340 may identify that the new number 354 has been updated in the contact widget 350. In an embodiment,
35 the user interface 340 may display an always update key 348. If the always update key 348 is selected, the contact widget 350 may be automatically updated without user action. Further, the

user interface 340 may be configured to allow a user to accept or deny the updated contact detail 350.

5 In an example embodiment, when a contact detail 345 is updated, the user interface 340 may display the new contact detail, for example, the new number 354 for a mobile phone in real time. In another example embodiment, the user interface 340 may display contact detail 345, such as a message indicating location, e.g., "On the way to the office." If desired, the user interface 340 may additionally or alternatively display the representation 356 of the update in real time. For example, the user interface 340 may display the new number 354 and representation 356, such as a "NEW" bubble or a new box, to represent that the contact widget 350 has been
10 updated. Further, the user interface 340 may provide an indicator of the update, for example a visual indicator, an audio indicator, e.g., a sound, a combination thereof, and/or the like.

In an embodiment, the user interface 340 may update the contact widget 350 upon communication with a contact associated with the contact widget 350. In an embodiment, the user interface 340 updates the contact widget 350 using a synchronization message. In an
15 embodiment, synchronization of an updated contact widget, such as contact widget 350, may be performed concurrently when communication between users begins. In an embodiment, the user interface 340 may display the contact widget 350 until a second contact widget is updated. Further, the user interface 340 may communicate a message between one or more users with updated contact detail 350.

20 In an embodiment, the user interface 340 may be configured to allow a user to position the at least one contact widget on the user interface. For example, a user may move the contact widget 350 to a different location on the user interface 340 for a more preferred view. It should be understood that the user interface 340 may be capable of displaying any information from the contact widget 350. It should be further understood that user interface 340 may also be
25 configured to display multiple contact widgets and/or information, such as an email address.

In an embodiment, the user interface 340 may be display the contact widget 350 until a second contact widget is updated. Further, the user interface 340 may provide a visual indicator of the update, present a sound, a combination thereof, and/or the like. In an embodiment, the user interface 340 may be configured to allow a user to position the at least one contact widget on the
30 user interface. For example, a user may move the contact widget 350 to a different location on the user interface 340 for a more preferred view.

FIGURE 4 is a screen view depicting contact widgets 405 in a screen saver view 400 in accordance with an example embodiment of the invention. In this example embodiment, a user interface, such as user interface 215 of FIGURE 2, may be configured to display at least one of
35 the at least one contact widget 405 in real time as a screen saver 400. For example, the screen saver 400, using an example embodiment of the invention, may display contact widgets 405 as the contact widgets become updated. In this way, a user interface may display a screen saver 400

with updated contact widgets as contact information changes, e.g., a new user location. It should be understood that the screen saver 400 may be updated with the at least one contact widget 405 in a similar manner as described throughout the specification. It should be further understood that a screen saver may be a program that displays information, such as contact widgets, after an update on a screen when an electronic device is idle. It should be also understood that the screen saver may display new information for a contact widget based at least in part on an update.

FIGURE 5 is a screen view depicting contact widgets 505 in a grid view 500 according to an example embodiment of the invention. In this example embodiment, a user interface, such as user interface 215 of FIGURE 2, may be configured in a grid view 500. In an embodiment, a grid view 500 may present one or more graphical user interface elements in a tabular view of data. For example, the user interface may display the contact widgets 505 and available contact detail 535 in a tabular or grid view 500. The grid view 500, using an example embodiment of the invention, may update the display of contact widgets 505 as the contact widgets become updated.

FIGURE 6 is a screen view depicting a contact widget 615 in a stacked view 600 according to an example embodiment of the invention. In this example embodiment, a user interface, such as user interface 215 of FIGURE 2, may be configured to display the at least one contact widget 615 in a stacked view 600. In an embodiment, the stacked view 600 may display a contact widget 615 on the user interface and one or more tabs 620 for additional contact widgets. In an embodiment, the stacked view 600 may allow a user to view additional contact widgets, e.g., a stacked contact, by selecting the corresponding tab 620. In an embodiment, the user interface may be configured to provide an indicator 610 to select a next widget from the stacked view 600. Further, the indicator 610 may be a hard key or soft key. It should be understood that a hard key may be a hard-coded key, such as a number on a key pad, the send/end key of a mobile phone, and/or the like. Further, a soft key may be a button, which performs a feature dependent on the text shown on the user interface. It should be further understood that the stacked view 600 may display updated contact widgets 615 in a similar manner as described throughout the specification.

In an alternative embodiment, the stacked view 600 may be further configured to scroll 605 the display of at least one contact widget and/or contact detail. In an embodiment, the scroll 605 may be designed as a long rectangular area on one or two sides of the viewing area, comprising a bar or the like. In an embodiment, the bar may be dragged along a track to move the body of the contact widget towards either end of the viewing area.

FIGURE 7A is a flow diagram depicting an example method 700 for transferring one or more updated contacts in accordance with an example embodiment of the invention. Example method 700 may be performed by an electronic device, for example as electronic device 200 or 202 of FIGURE 2. At 705, one or more contact widgets may be updated in real time. For example, the electronic device may update one or more contact widgets. For example, when a

user changes one or more of his contact details, such as his phone number. At 710, the one or more updated contact widgets may be transferred to one or more locations. For example, the electronic device may transfer the one or more contact widgets to a second electronic device, a server, a service, and/or the like.

5 FIGURE 7B is a flow diagram depicting an example method 750 for displaying one or more updated contacts in accordance with an example embodiment of the invention. Example method 750 may be performed by an electronic device, for example electronic device 202 of FIGURE 2. At 715, the one or more updated contact widgets may be received. For example, the electronic device may receive one or more updated contact widgets from a second electronic
10 device, such as electronic device 200 of FIGURE 2, a server, a service, and/or the like.

 In an embodiment, a user interface, such as user interface 240 of FIGURE 2, may display one or more contact widgets based at least in part on a tag. At 725, the one or more contact widgets may be tagged. The contact widgets may be tagged, for example, based at least in part on a frequency of mobile communication, a group, a calendar entry, the update, and/or the like as
15 discussed herein. At 730 it is determined if at least one contact widget is to be locked, e.g., to be displayed regardless of tags. In an example embodiment, this determination may be based on a user preference. If it is determined that at least one contact widget is to be locked, then at 735 at least one contact widget is locked. At 742, at least one locked contact widget is displayed. If desired, one or more contact widgets that are not locked may be displayed based at least in part on
20 the tag.

 If at 730, it is determined that none of the contact widgets are to be locked, then at 740, the one or more contact widgets may be displayed based at least in part on the tag. For example, the user interface may display the updated contact widgets, which are tagged.

 In an embodiment, the user interface of the electronic device may display the one or more
25 contact widgets as a screen saver, a stacked view, a grid view, and/or the like. In an embodiment, the user interface may also provide an indicator to select a next contact widget from the stacked view.

 Without in any way limiting the scope, interpretation, or application of the claims appearing below, it is possible that a technical effect of one or more of the example embodiments
30 disclosed herein may be updating contact widgets in real time. Another possible technical effect of one or more of the example embodiments disclosed herein may be synchronized contact widgets in an electronic device, server, and/or the like. Another technical effect of one or more of the example embodiments disclosed herein may be dynamic display of one or more contact
35 widgets.

 Embodiments of the present invention may be implemented in software, hardware, application logic or a combination of software, hardware and application logic. The software, application logic and/or hardware may reside on an electronic device or a server. If desired, part

of the software, application logic and/or hardware may reside on an electronic device, and part of the software, application logic and/or hardware may reside on a server. The application logic, software or an instruction set is preferably maintained on any one of various conventional computer-readable media. In the context of this document, a “computer-readable medium” may
5 be any media or means that can contain, store, communicate, propagate or transport the instructions for use by or in connection with an instruction execution system, apparatus, or device.

If desired, the different functions discussed herein may be performed in any order and/or concurrently with each other. Furthermore, if desired, one or more of the above-described functions may be optional or may be combined.

10 Although various aspects of the invention are set out in the independent claims, other aspects of the invention comprise any combination of features from the described embodiments and/or the dependent claims with the features of the independent claims, and not solely the combinations explicitly set out in the claims.

It is also noted herein that while the above describes example embodiments of the
15 invention, these descriptions should not be viewed in a limiting sense. Rather, there are several variations and modifications which may be made without departing from the scope of the present invention as defined in the appended claims.

WHAT IS CLAIMED IS

1. An apparatus, comprising:
a processor configured to update at least one contact widget in real time; and
a user interface configured to display at least one contact widget.
2. The apparatus of Claim 1 wherein the apparatus is an electronic device or a server.
3. The apparatus of Claim 1 further comprising a communication interface
configured to receive at least one updated contact widget from a server or service.
4. The apparatus of Claim 1 further comprising a communication interface to
receive synchronized data for the at least one contact widget from a contacts server.
5. The apparatus of Claim 1 wherein the at least one contact widget comprises at
least one of the following information: a mobile number, a name, a short message service contact,
a multimedia messaging service contact, an email address, a chat identifier, a location, an Internet
protocol address, an Inter service provider, a voice over Internet protocol client, user profile
information, one or more shared files, or combination thereof.
6. The apparatus of Claim 1 wherein the processor is configured to lock a status of
the at least one contact widget.
7. The apparatus of Claim 1 wherein the processor is configured to tag the at least
one contact widget.
8. The apparatus of Claim 1 wherein the processor is further configured to tag the at
least one contact widget based at least in part on frequency of mobile communication between an
electronic device and a contacts server.
9. The apparatus of Claim 8 wherein the mobile communication is at least one of the
following: an exchange of short message service, an exchange of a multimedia messaging service,
a chat, an email, a share of media, a share of location, a game interaction, or combination thereof.
10. The apparatus of Claim 1 wherein the processor is further configured to tag the at
least one contact widget based at least in part on frequency of mobile communication between an
electronic device and a service.

11. The apparatus of Claim 10 wherein the mobile communication is at least one of the following: an exchange of short message service, an exchange of a multimedia messaging service, a chat, an email, a share of media, a share of location, a game interaction, or combination thereof.

5

12. The apparatus of Claim 1 wherein the processor is configured to tag at least one of the at least one contact widget based at least in part on a calendar entry.

13. The apparatus of Claim 1 wherein the processor is configured to tag at least one of the at least one contact widget based at least in part on a group of contact widgets.

10

14. The apparatus of Claim 1 wherein the user interface is further configured to display at least one of the at least one contact widget based at least in part on a tag.

15. The apparatus of Claim 1 wherein the user interface is further configured to display at least one of the at least one contact widget as a screen saver.

15

16. The apparatus of Claim 1 wherein the user interface is further configured to display the at least one contact widget and at least another contact widget in a stacked view.

20

17. The apparatus of Claim 16 wherein the user interface is further configured to provide an indicator to select a next contact widget from the stacked view.

18. The apparatus of Claim 17 wherein the indicator is a hard key or soft key.

25

19. The apparatus of Claim 1 wherein the user interface is further configured to display the at least one contact widget with an updated contact widget.

20. The apparatus of Claim 1 wherein the user interface is further configured to: display the at least one contact widget based at least in part on updates; and provide an indicator of the update.

30

21. The apparatus of Claim 1 wherein the user interface is configured to display at least one contact widget in a grid view.

35

22. The apparatus of Claim 1 wherein the user interface is further configured to scroll contact detail for at least one contact widget.

23. A method, comprising:
updating at least one contact widget in real time; and
displaying the at least one contact widget.

5 24. The method of Claim 23 further comprising receiving at least one updated contact widget from a server or service.

25. The method of Claim 23 wherein the at least one contact widget comprises at least one of the following information: a mobile number, a name, a short message service contact,
10 a multimedia messaging service contact, an email address, a chat identifier, a location, an Internet protocol address, an Inter service provider, a voice over Internet protocol client, user profile information, one or more shared files, or combination thereof.

26. The method of Claim 23 further comprising locking a status of the at least one
15 contact widget.

27. The method of Claim 23 further comprising tagging the at least one contact widget.

20 28. The method of Claim 23 further comprising tagging the at least one contact widget based at least in part on frequency of mobile communication between an electronic device and a contacts server.

29. The method of Claim 28 wherein the mobile communication is at least one of the
25 following an exchange of short message service, an exchange of a multimedia messaging service, a chat, an email, a share of media, a share of location, a game interaction, or combination thereof.

30. The method of Claim 23 further comprising tagging the at least one contact widget based at least in part on frequency of mobile communication between an electronic device
30 and a service.

31. The method of Claim 30 wherein the mobile communication is at least one of the following an exchange of short message service, an exchange of a multimedia messaging service, a chat, an email, a share of media, a share of location, a game interaction, or combination thereof.
35

32. The method of Claim 23 further comprising tagging at least one of the at least one contact widget based at least in part on a calendar entry.

33. The method of Claim 23 further comprising tagging at least one of the at least one contact widget based at least in part on a group of contact widgets.

5 34. The method of Claim 23 wherein displaying the at least one contact widget further comprises: displaying the at least one contact widget based at least in part on a tag.

35. The method of Claim 23 wherein displaying the at least one contact widget further comprises: displaying the at least one contact widget as a screen saver.

10 36. The method of Claim 23 wherein displaying the at least one contact widget further comprises: displaying the at least one contact widget and at least another contact widget in a stacked view.

15 37. The method of Claim 36 wherein displaying the at least one contact widget further comprises further comprises: providing an indicator to select a next contact widget from the stacked view.

38. The method of Claim 37 wherein the indicator is a hard key or soft key.

20 39. The method of Claim 23 further comprising updating a display the at least one contact widget with an updated contact widget.

40. The method of Claim 23 wherein displaying the at least one contact widget further comprises displaying at least one contact widget in a grid view.

25

41. The method of Claim 23 further comprising:
displaying the at least one contact widget based at least in part on updates; and
providing an indicator of the update.

30 42. The method of Claim 23 further comprising scrolling contact detail for at least one contact widget.

43. A computer program product comprising a computer-readable medium bearing computer program code embodied therein for use with a computer, the computer program code comprising:

35

code for updating at least one contact widget in real time; and
code for displaying the at least one contact widget.

44. A computer-readable medium encoded with instructions that, when executed by a computer, perform:

updating at least one contact widget in real time; and
displaying the at least one contact widget.

5

45. The apparatus as in any of claims 3-22 wherein the apparatus is an electronic device or a server.

46. The apparatus as in any of claims 2 or 4-22 further comprising a communication interface configured to receive at least one updated contact widget from a server or service.

10

47. The apparatus as in any of claims 2-3 or 5-22 further comprising a communication interface to receive synchronized data for the at least one contact widget from a contacts server.

15

48. The apparatus as in any of claims 2-4 or 6-22 wherein the at least one contact widget comprises at least one of the following information: a mobile number, a name, a short message service contact, a multimedia messaging service contact, an email address, a chat identifier, a location, an Internet protocol address, an Inter service provider, a voice over Internet protocol client, user profile information, one or more shared files, or combination thereof.

20

49. The method as in any of claims 25-42 further comprising receiving at least one updated contact widget from a server or service.

25

50. The method as in any of claims 24 or 26-42 wherein the at least one contact widget comprises at least one of the following information: a mobile number, a name, a short message service contact, a multimedia messaging service contact, an email address, a chat identifier, a location, an Internet protocol address, an Inter service provider, a voice over Internet protocol client, user profile information, one or more shared files, or combination thereof.

30

51. The method as in any of claims 24-25 or 27-42 further comprising locking a status of the at least one contact widget.

52. The method as in any of claims 24-26 or 28-42 further comprising tagging the at least one contact widget.

35

53. The as in any of claims 24-27 or 29-42 further comprising tagging the at least one contact widget based at least in part on frequency of mobile communication between an electronic device and a contacts server.

1/6

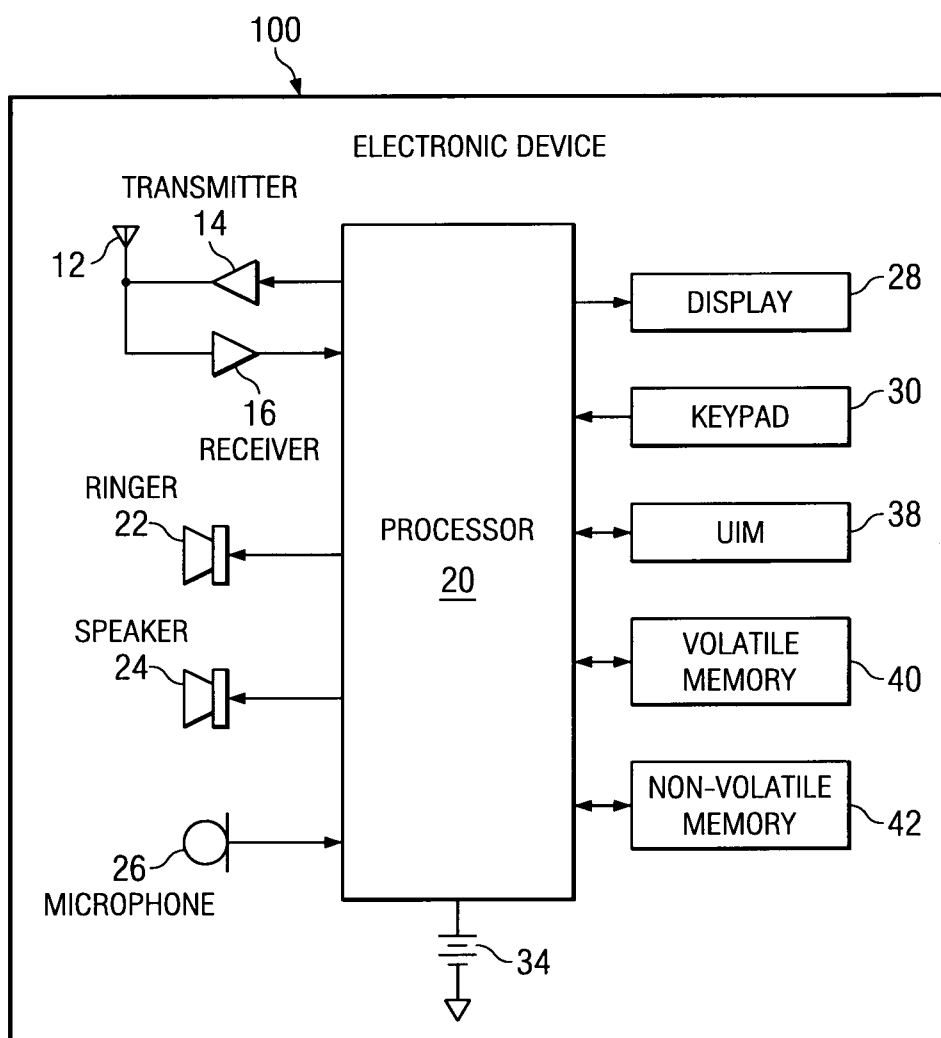


FIG. 1

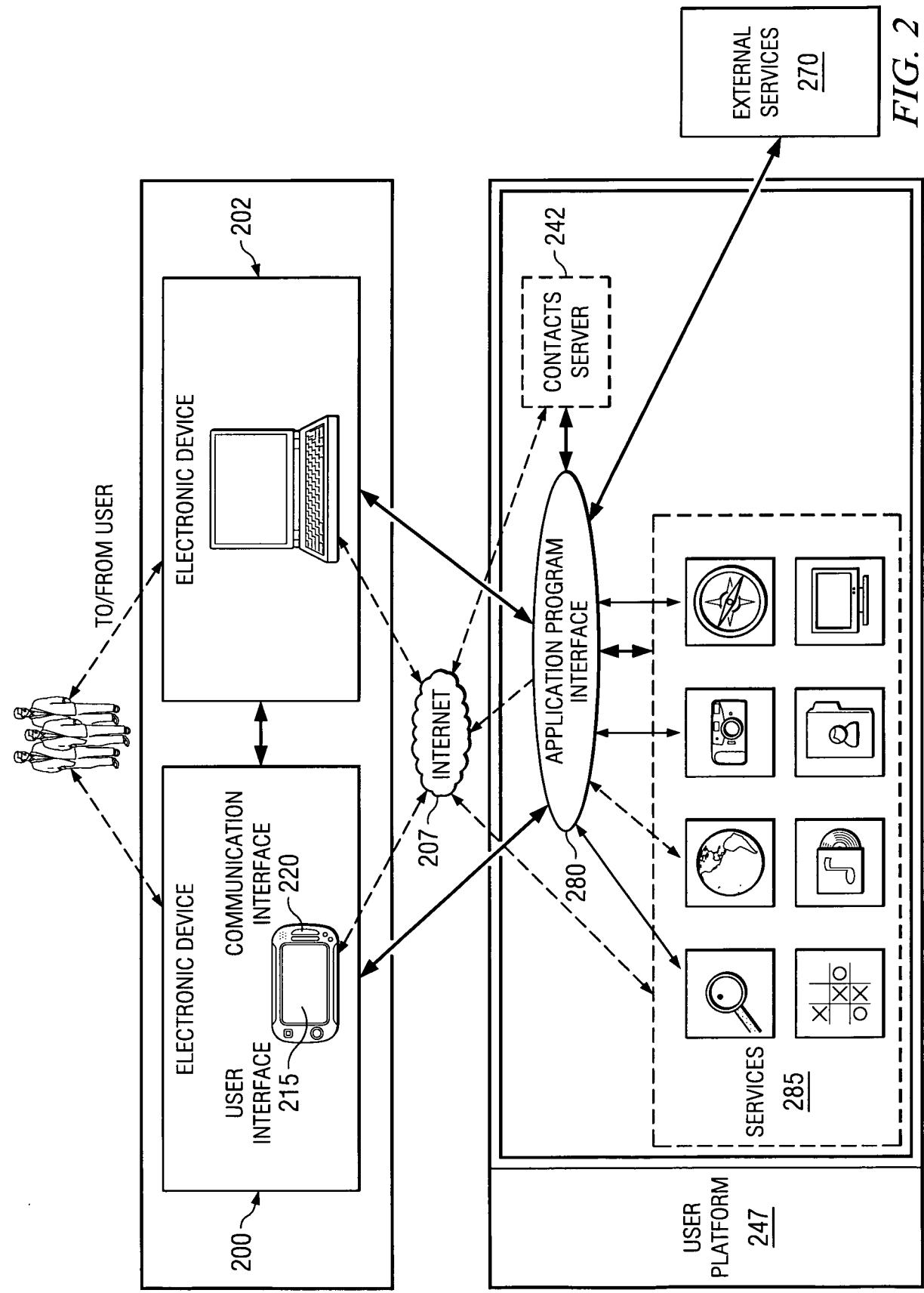


FIG. 2

3/6



FIG. 3

4/6

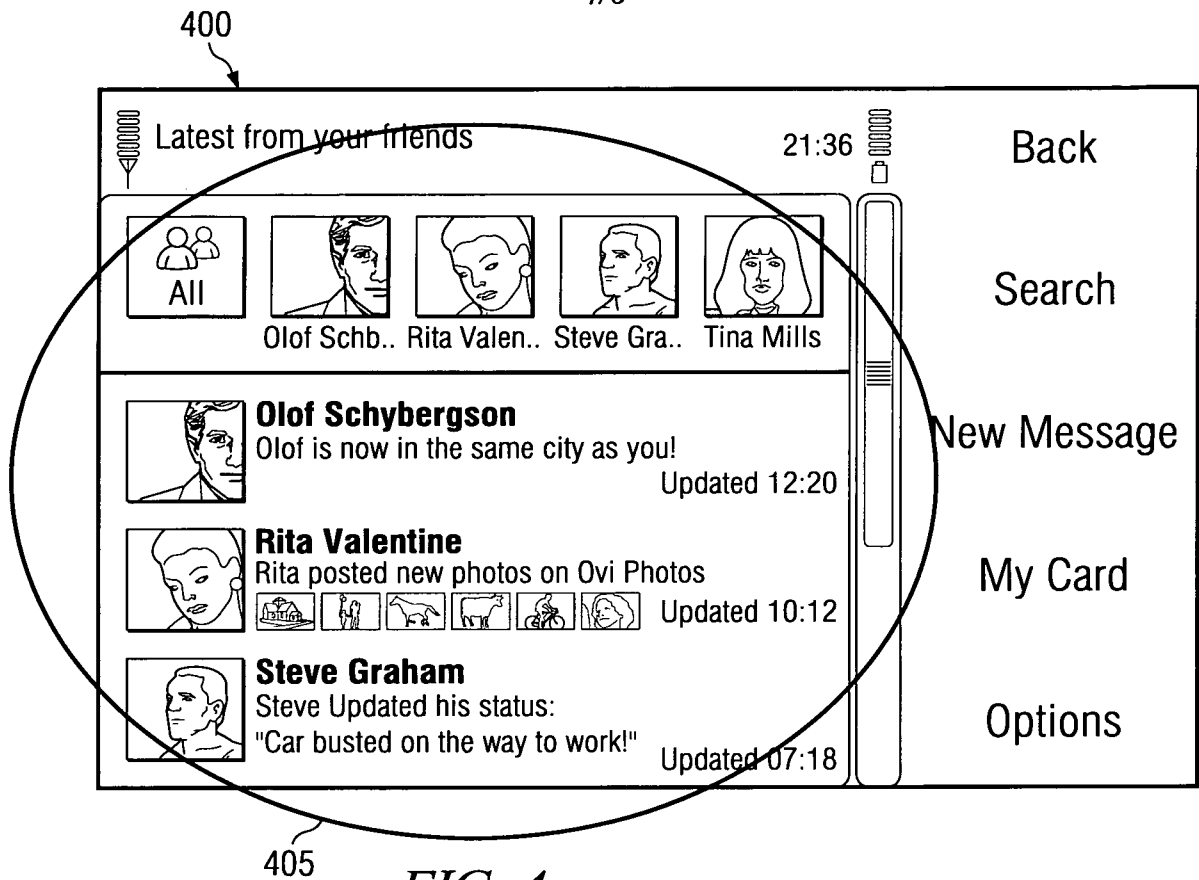


FIG. 4

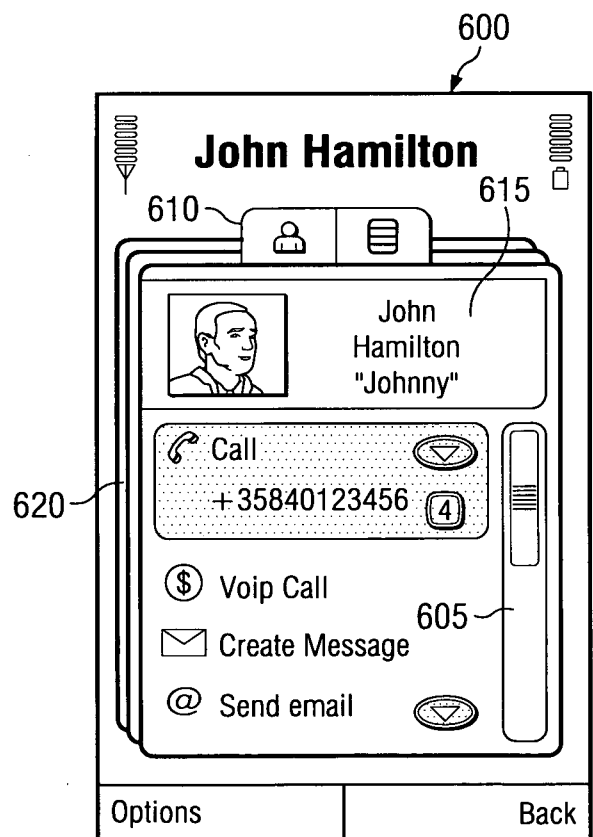


FIG. 6

5/6

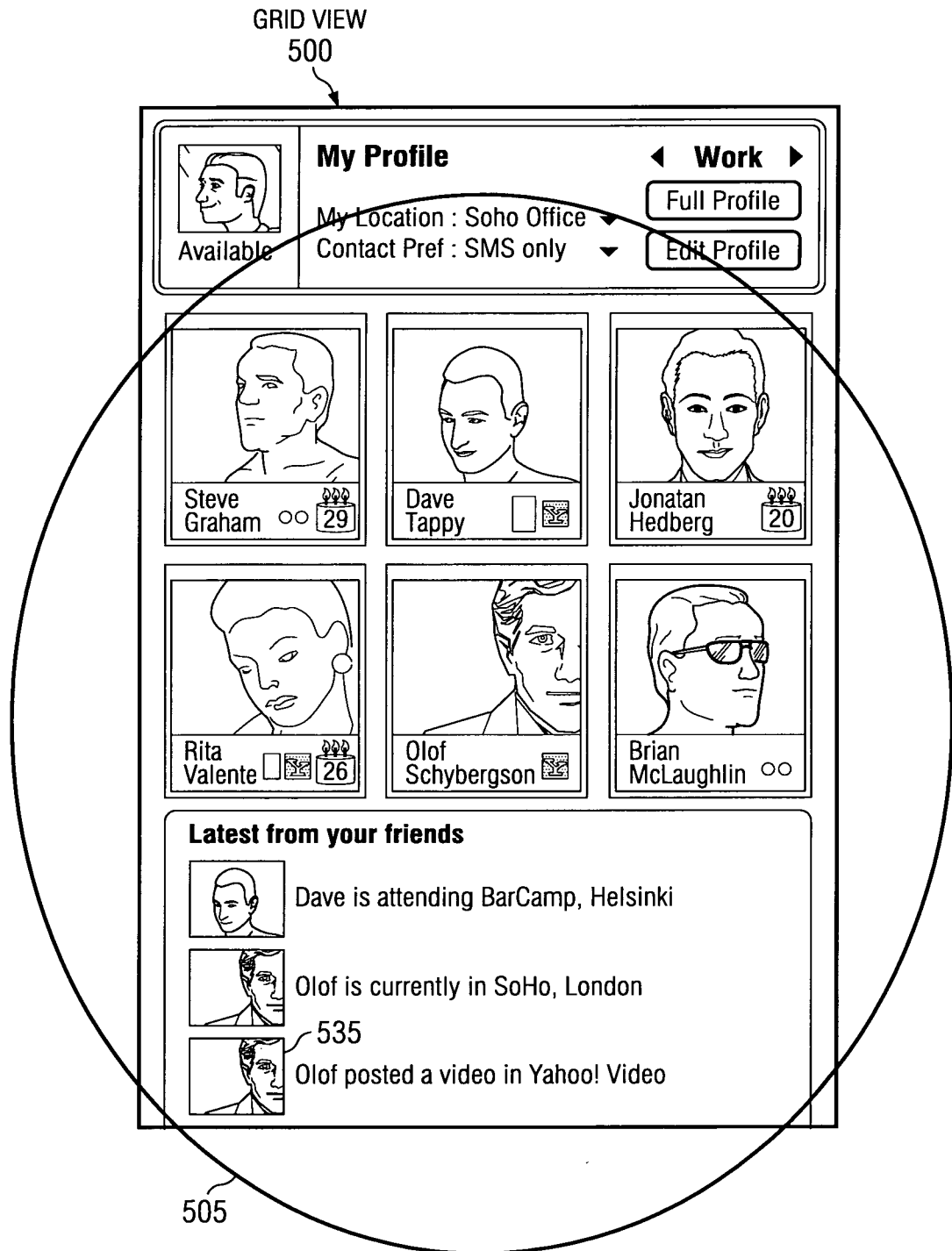
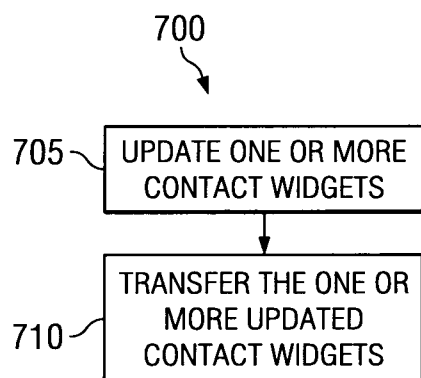
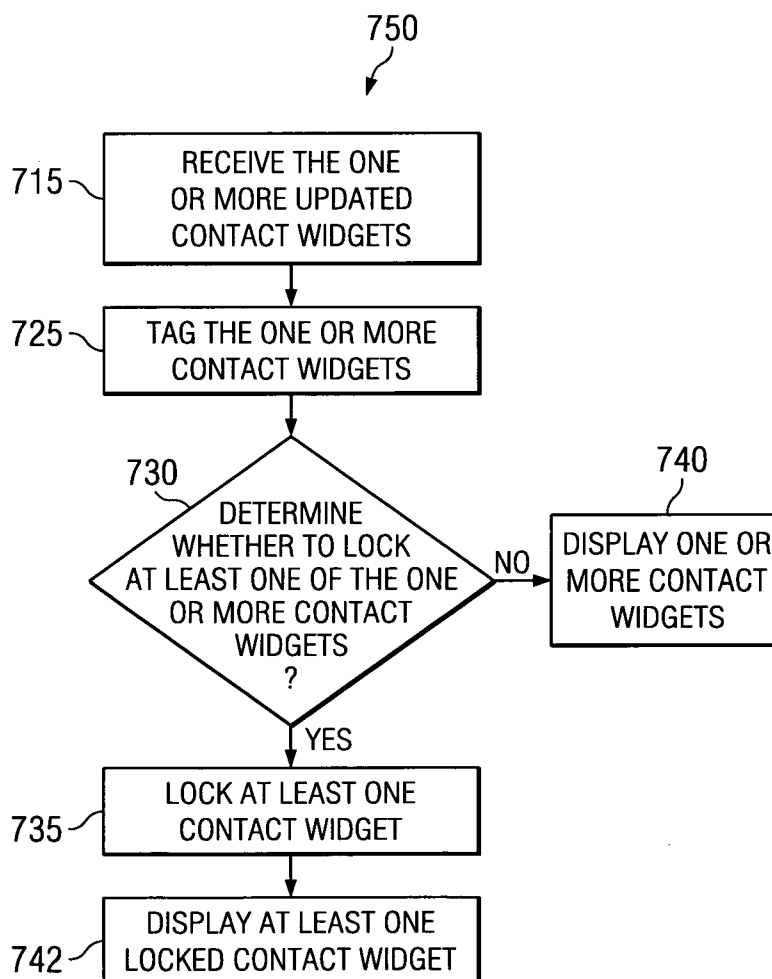


FIG. 5

6/6

*FIG. 7A**FIG. 7B*

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB2009/006931

A. CLASSIFICATION OF SUBJECT MATTER

IPC: see extra sheet

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: G06F, H04W

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 20080005263 A1 (I. BARAEV ET AL), 3 January 2008 (03.01.2008), figures 6-9, abstract, paragraphs (0040)-(0042), (0048)-(0054), (0060)-(0062), (0064) --	1-53
X	US 20060229063 A1 (Z. KOCH), 12 October 2006 (12.10.2006), figure 3, abstract, paragraph (0007) -- -----	1-53

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered

to be of particular relevance

"E" earlier application or patent but published on or after the international

filing date

"L" document which may throw doubts on priority claim(s) or which is

cited to establish the publication date of another citation or other

special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other

means

"P" document published prior to the international filing date but later than

the priority date claimed

"T" later document published after the international filing date or priority

date and not in conflict with the application but cited to understand

the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be

considered novel or cannot be considered to involve an inventive

step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be

considered to involve an inventive step when the document is

combined with one or more other such documents, such combination

being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

15 December 2009

Date of mailing of the international search report

18-12-2009

Name and mailing address of the ISA/

Swedish Patent Office

Box 5055, S-102 42 STOCKHOLM

Facsimile No. +46 8 666 02 86

Authorized officer

Oskar Pihlgren / MRo

Telephone No. +46 8 782 25 00

International patent classification (IPC)**H04W 68/00** (2009.01)**G06F 17/30** (2006.01)**Download your patent documents at www.prv.se**

The cited patent documents can be downloaded:

- From "Cited documents" found under our online services at www.prv.se (English version)
- From "Anförda dokument" found under "e-tjänster" at www.prv.se (Swedish version)

Use the application number as username. The password is

SPJZANQFQH.

Paper copies can be ordered at a cost of 50 SEK per copy from PRV InterPat (telephone number 08-782 28 85).

Cited literature, if any, will be enclosed in paper form.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/IB2009/006931

US	20080005263	A1	03/01/2008	NONE
----	-------------	----	------------	------

US	20060229063	A1	12/10/2006	NONE
----	-------------	----	------------	------