

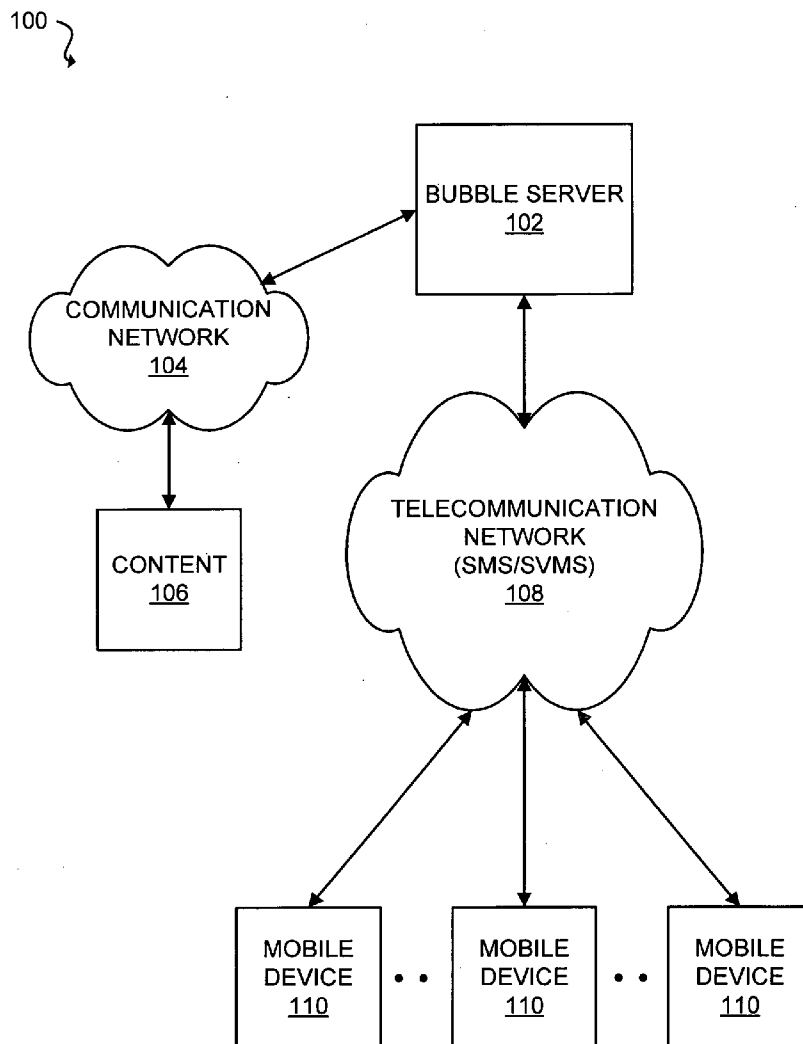


US 20080182603A1

(19) **United States**(12) **Patent Application Publication**
Still et al.(10) **Pub. No.: US 2008/0182603 A1**(43) **Pub. Date: Jul. 31, 2008**(54) **SYSTEMS AND METHODS FOR
DISTRIBUTING MESSAGES TO MOBILE
DEVICES****Related U.S. Application Data**(60) Provisional application No. 60/898,678, filed on Jan.
30, 2007.(76) Inventors: **David Barnes Still**, Menlo Park,
CA (US); **Thyagarajapuram S.
Ramakrishnan**, Saratoga, CA
(US); **Chintamani Patwardhan**,
Sunnyvale, CA (US); **Adrian
Chan**, Cupertino, CA (US)**Publication Classification**(51) **Int. Cl.**
H04Q 7/20 (2006.01)(52) **U.S. Cl.** **455/466**(57) **ABSTRACT**

A system and method for delivering messages and/or multimedia content using a short message services (SMS) telecommunication network. Mobile devices are coupled to the telecommunication network. A sender may distribute the message using a mobile device to a recipient on another telecommunication network. In one embodiment, a message is requested using a unique pairing identifier and the message is streamed to the recipient. The message may include a multimedia content, and may be based on a demographic trait of the recipient.

Correspondence Address:
CARR & FERRELL LLP
2200 GENG ROAD
PALO ALTO, CA 94303

(21) Appl. No.: **12/012,094**(22) Filed: **Jan. 30, 2008**

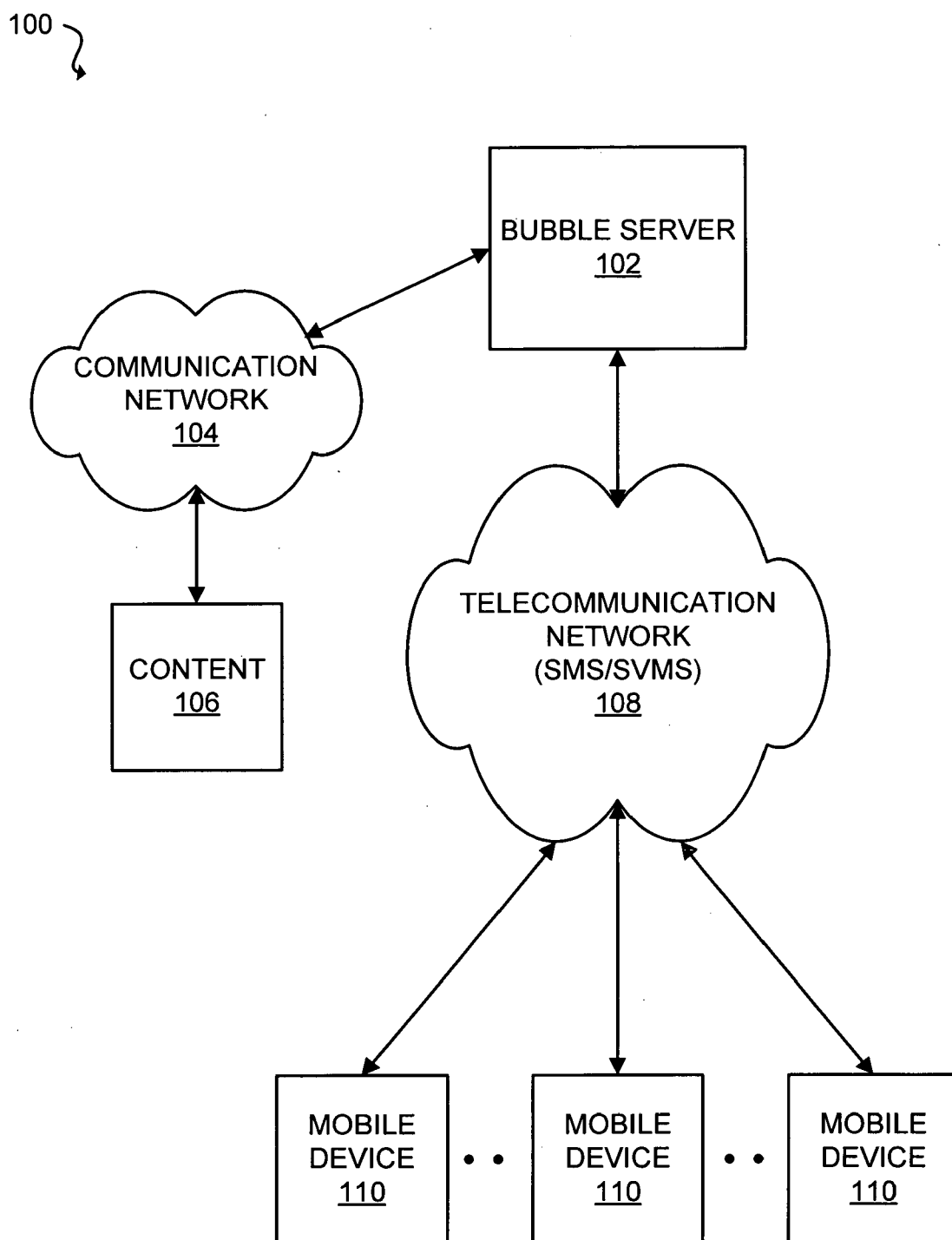


FIG. 1

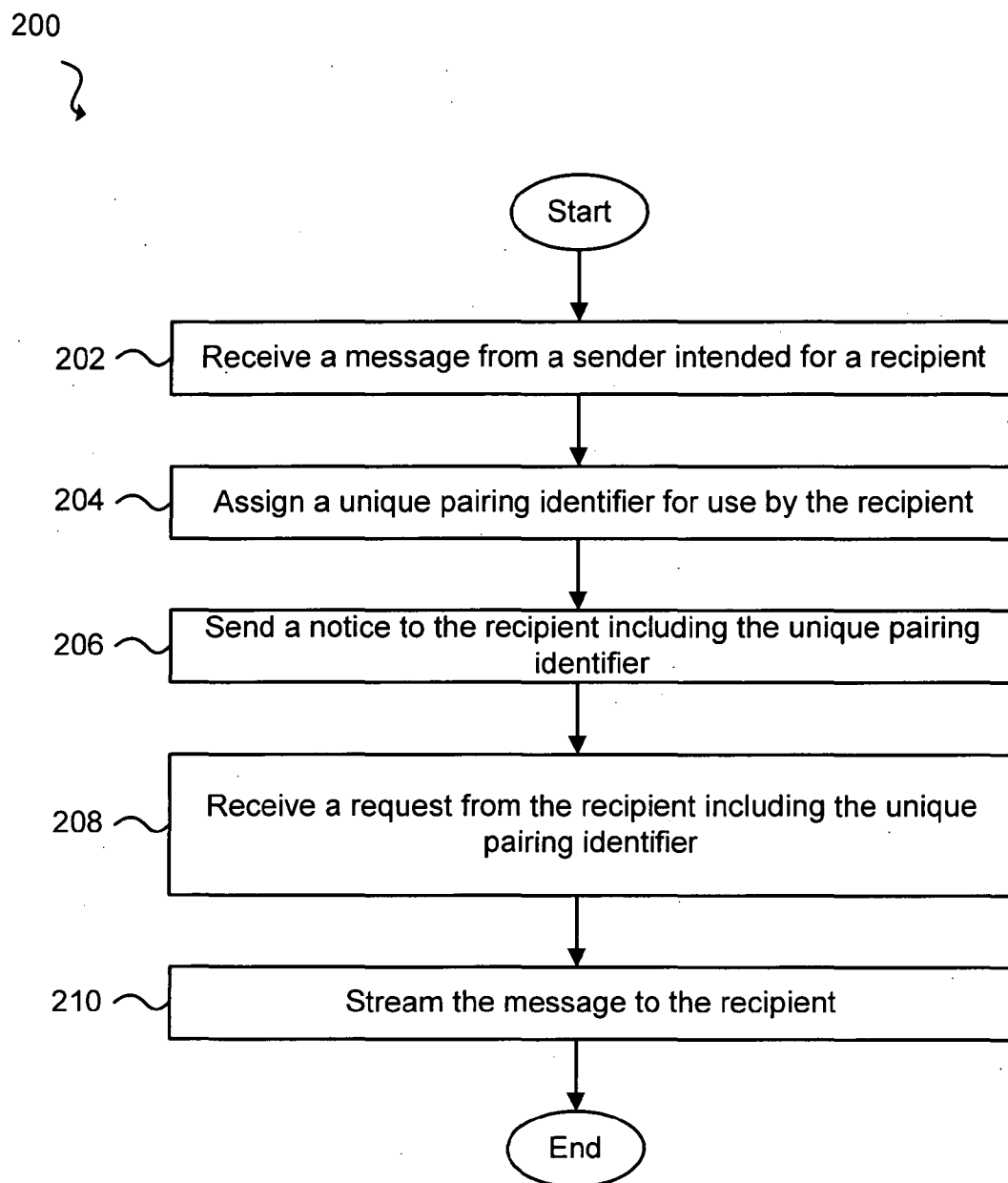


FIG. 2

300 ↗

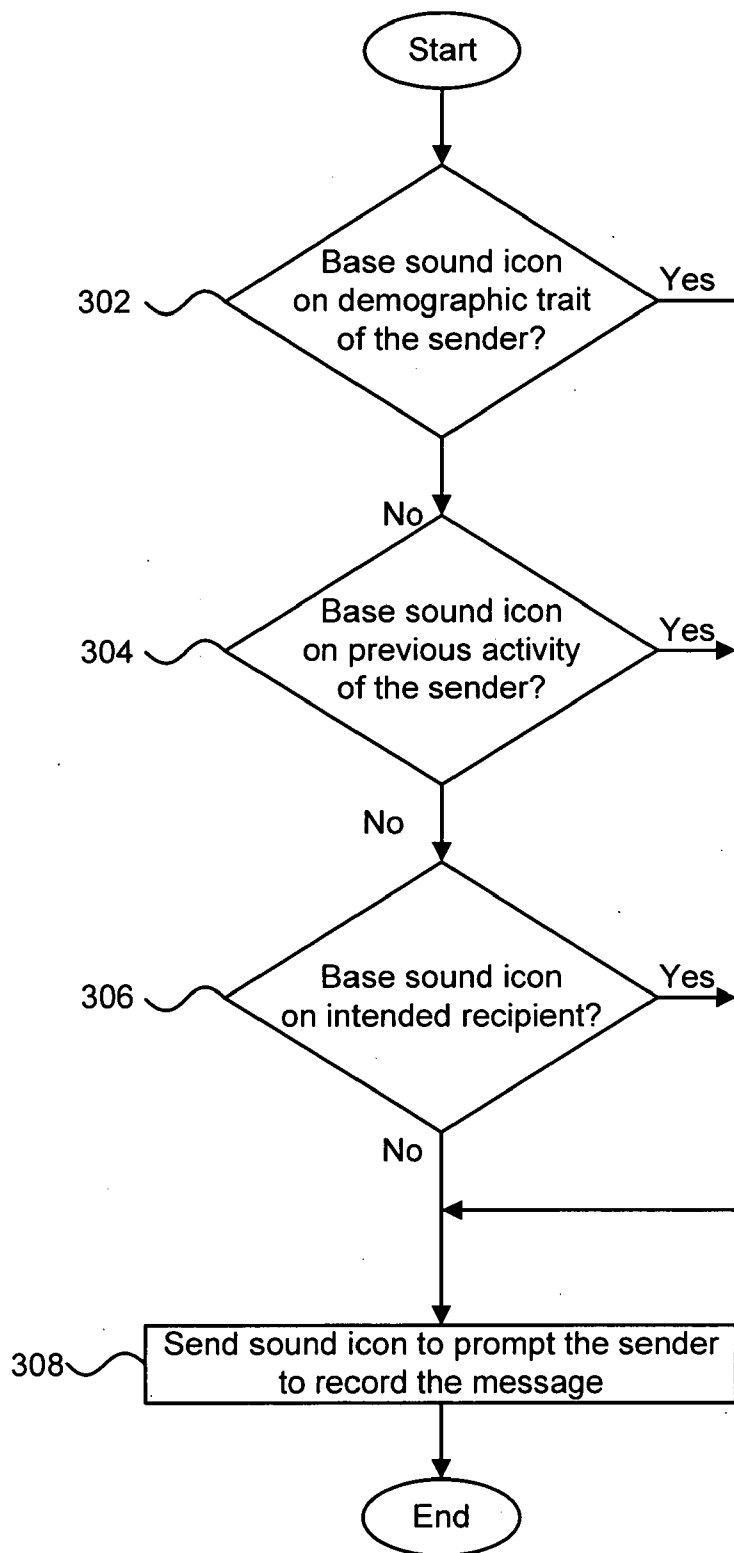


FIG. 3

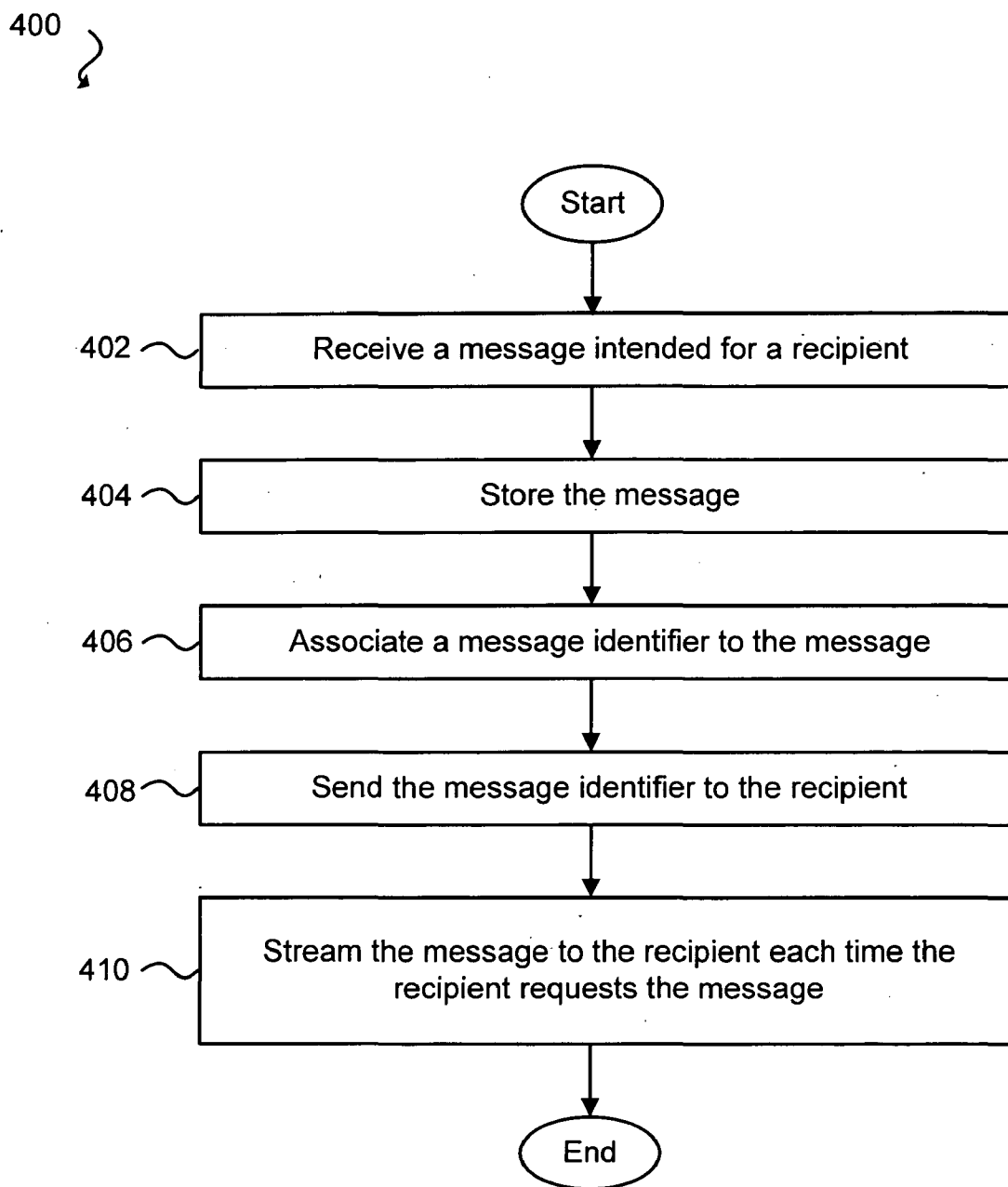


FIG. 4

Mobile Device Telephone Number		
Sender	Recipient	Unique Pairing Identifier
6505551212	4085551212	*21
9255551212	4085551212	*22
8585551212	4085551212	*23

FIG. 5

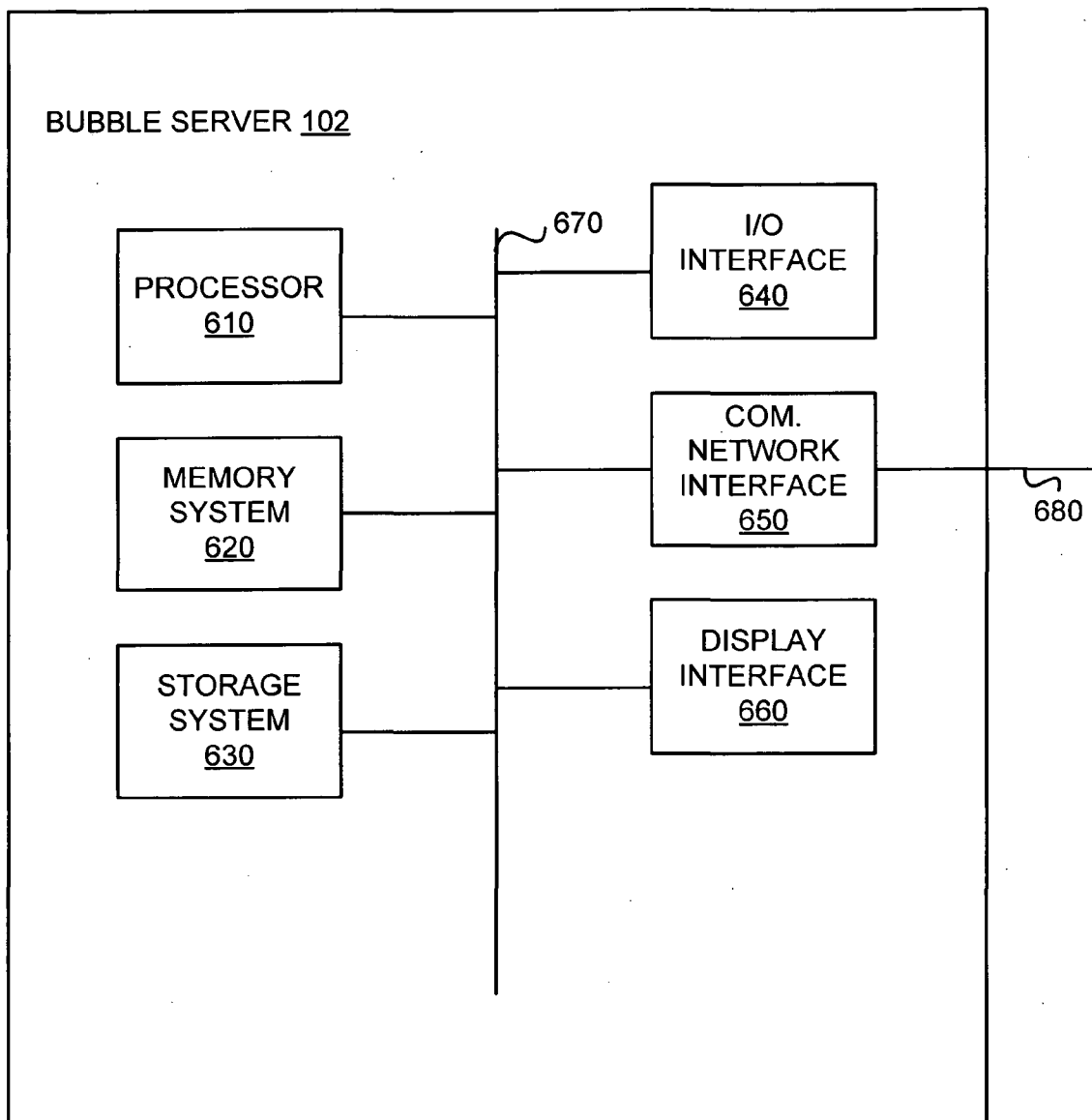


FIG. 6

SYSTEMS AND METHODS FOR DISTRIBUTING MESSAGES TO MOBILE DEVICES

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit and priority of U.S. Provisional Application Ser. No. 60/898,678 titled “Systems and Methods for Voice Messaging,” filed Jan. 30, 2007, which is hereby incorporated by reference.

BACKGROUND

[0002] 1. Field of Invention

[0003] The present invention relates generally to messaging, and more particularly to systems and methods for distributing messages to mobile devices.

[0004] 2. Related Art

[0005] The popularity of mobile communications has expanded the available protocols beyond voice communications to text messaging, such as Short Message Service (SMS), and voice messaging, such as Short Voice Message Service (SVMS). SMS is a telecommunication service allowing mobile device users to send and receive text messages. SVMS allows mobile device users to send and receive voice recordings.

[0006] Traditionally, SMS users subscribe to a cellular telephone provider. SMS senders typically include many abbreviations to keep a message short. SMS thus provides a “type and read” text messaging service to mobile devices. SMS and SVMS lack a guarantee that a message will be delivered to a recipient, and lack a confirmation that a message was delivered.

SUMMARY

[0007] Embodiments of the invention include a method for receiving a message from a sender intended for a recipient, the message received using a server, assigning a unique pairing identifier for use by the recipient, and sending a notice to the recipient, the notice including the unique pairing identifier. The method further includes receiving a request from the recipient requesting the message, the request including the unique pairing identifier, and streaming the message to the recipient using the server.

[0008] According to another embodiment of the invention, a method includes receiving a message intended for a recipient using a server, storing the message on the server, associating a message identifier with the message, the message identifier configured to distinguish the message from other messages intended for the recipient, and sending the message identifier to the recipient. The method further includes streaming the message to the recipient each time the recipient requests the message, the request including the message identifier.

[0009] According to another embodiment of the invention, a computer readable medium has embodied thereon a program, the program being executable by a computing device for performing a method comprising receiving a message from a sender intended for a recipient, the message received using the computing device, assigning a unique pairing identifier for use by the recipient and sending a notice to the recipient, the notice including the unique pairing identifier. The method further includes receiving a request from the recipient requesting the message, the request including the

unique pairing identifier, and streaming the message to the recipient using the computing device.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] Elements in the figures are illustrated for simplicity and clarity and are not drawn to scale. The dimensions of some of the elements may be exaggerated relative to other elements to help improve the understanding of various embodiments of the invention.

[0011] FIG. 1 is a block diagram illustrating an exemplary system for distributing messages to mobile devices.

[0012] FIG. 2 is a flow chart illustrating an exemplary method for distributing messages to mobile devices.

[0013] FIG. 3 is a flow chart illustrating an exemplary method for using sound icons.

[0014] FIG. 4 is a flow chart illustrating an exemplary method for distributing messages to mobile devices.

[0015] FIG. 5 is a diagram illustrating unique pairing identifiers.

[0016] FIG. 6 is a block diagram of a bubble server in one exemplary implementation of the invention.

DETAILED DESCRIPTION

[0017] FIG. 1 is a block diagram illustrating an exemplary system **100** for distributing messages to mobile devices. System **100** comprises a bubble server **102**, a communication network **104**, a content **106**, a telecommunication network (SMS/SVMS) **108**, and the mobile devices **110**. Using a SMS/SVMS service capability provided by the telecommunication network (SMS/SVMS) **108**, the bubble server **102** facilitates the distribution of messages to the mobile devices **110**.

[0018] In various embodiments, system **100** may be one of a plurality of similar systems coupled via the communication network **104** and/or the telecommunication network (SMS/SVMS) **108**. Thus, a sender (not shown) may distribute a message using a mobile device **110** to a recipient (not shown) coupled to a second telecommunication network (SMS/SVMS) (not shown).

[0019] The bubble server **102**, according to one embodiment, may be a computing device configured to store and process instructions, store and process data, and communicate with the communication network **104**, the content **106**, the telecommunication network (SMS/SVMS) **108**, and the mobile devices **110**. The bubble server **102** receives a message from a sender intended for a recipient, and assigns a unique pairing identifier for use by the recipient. The bubble server **102** further sends a notice to the recipient, the notice including the unique pairing identifier, receives a request from the recipient requesting the message, the request including the unique pairing identifier, and streams the message to the recipient. The bubble server **102** thus provides a click, talk and send capability that is not provided by the “type and read” messaging services provided by a Short Message Service (SMS) system. Streaming includes data streaming, audio streaming and video streaming, and includes providing to mobile device **110** the message such that the recipient may listen to and/or view the message while the message is being streamed.

[0020] The bubble server **102** may communicate with the communication network **104**, the content **106**, the telecommunication network (SMS/SVMS) **108**, and the mobile devices **110** using appropriate protocols, such as the Hyper-

text Transfer Protocol (HTTP), File Transfer Protocol (FTP), short message service (SMS), short voice message service (SVMS), cellular telephone protocols such as Global System for Mobile communications (GSM), Code Division Multiple Access (CDMA), General Packet Radio Service (GPRS), Enhanced Data Rates for GSM Evolution (EDGE), or High-Speed Circuit-Switched Data (HSCSD), and/or other standards for communicating with digital devices, such as, but not limited to, Institute of Electrical and Electronics Engineers (IEEE) Standards 802.11 a/b/g/n, Bluetooth, and so forth.

[0021] The communication network **104** couples the content **106** to the mobile devices **110** via the bubble server **102** and the telecommunication network (SMS/SVMS) **108**. The content **106** may be accessed by several methods, including, but not limited to the web or telephone devices. The content **106** may be one or more forms of messages, information, and/or data. The content **106** may include a SMS and/or SVMS message, multimedia content, including, but not limited to, audio content (e.g., voice messages), music, electronic books, video content, animation content, and/or other forms of content for communication, advertising, entertainment, and so forth.

[0022] The mobile devices **110** may access the content **106** to listen and/or view a multimedia content, to dedicate a multimedia content to a recipient, and/or to forward a multimedia content to a recipient. A user of the mobile devices **110** may access the content **106** using a subscription model, or may purchase the content **106**, such as a ringtone, voice message, music, and so forth. The bubble server **102** may include the content **106**, and/or the content **106** may be coupled to the bubble server **102** as illustrated in FIG. 1.

[0023] The content **106** may include famous quotes or statements from prominent celebrities, such as a voice message saying, 'Frankly, my dear, I don't give a damn,' or 'Make my day.' The content **106** may be in the sender's voice, or may be in the voice of another person. Other messages may include a song, such as the 'happy birthday' song, or other theme song, with background music and the sender's voice, or with someone else's voice singing the words. In various embodiments, the content **106** may include a cross-network talk and listen message of the BubbleTalk™ system developed by Bubble Motion, Pte. Ltd. Access to the content **106** may be provided by the web, i.e., the Internet, via HTTP, FTP, and/or telephone services, including, but not limited to GSM, CDMA, GPRS, EDGE or HSCSD, and/or Bluetooth, and so forth.

[0024] The telecommunication network (SMS/SVMS) **108** provides SMS and SVMS services to the mobile devices **110**, and couples the bubble server **102**, the content **106**, and the mobile devices **110**. The telecommunication network (SMS/SVMS) **108** may be a cellular telephone network, such as GSM, CDMA, GPRS, EDGE, HSCSD, or other communication network for communicating with remote digital devices using, for example, IEEE Standards 802.11 a/b/g/n, Bluetooth, and so forth.

[0025] The mobile devices **110** provide access between senders and recipients (e.g., mobile device users), the bubble server **102** and the content **106**. The mobile devices **110** may be a cellular telephone, a personal digital assistant, a laptop computer, or other portable digital device. The mobile devices **110** need not be mobile in the conventional sense, and may include any digital device configured to couple to the telecommunication network (SMS/SVMS) **108**.

[0026] To access the content **106**, a mobile device user may register their mobile device **110** using the communication network **104**. After registration, the mobile device user has access to send and receive messages via the system **100**. A mobile device user may call in and listen to the content **106**, i.e., by pulling the content **106** to the user's mobile device **110**. A mobile device user may access a content channel (e.g., a portion of the content **106**) to listen to or view different types of content. A mobile device user may forward the content **106** to a friend, i.e., push the content **106** to a recipient. A mobile device user may call in and dedicate the content **106** to a friend, i.e., a recipient, who may then receive the content **106**.

[0027] FIG. 2 is a flow chart illustrating an exemplary method **200** for distributing messages to mobile devices. At step **202**, the bubble server **102** (FIG. 1) receives a message from a sender intended for a recipient. The message may be received using the telecommunication network (SMS/SVMS) **108**, and the message may be a SMS or SVMS message. The sender may use the mobile device **110** (FIG. 1) to send the message. The sender may alternatively use other communication networks, e.g., the Internet, a telephone, and so forth, to send the message intended for a recipient.

[0028] At step **204**, a unique pairing identifier is assigned for use by the recipient. The unique pairing identifier uniquely identifies the sender to the recipient, and allows the recipient to receive the sender's messages. The unique pairing identifier allows the bubble server **102** to receive a request from the recipient requesting the message. Thus, the recipient may not need the sender's telephone number to request the message. In one example, a unique pairing identifier may be an asterisk and a number 21, e.g., "*21." The unique pairing identifier may be specific to the sender and the recipient, so that the recipient needs only to provide the unique pairing identifier to view any message from the sender. The unique pairing identifier may be created immediately from the first message, or the unique pairing identifier may be created after a sender sends a pre-determined number of messages to a recipient.

[0029] At step **206**, a notice is sent to the recipient, the notice including the unique pairing identifier. The unique pairing identifier may be displayed on the recipient's mobile device **110** as an incoming notice. The notice informs the recipient that a message from the sender is available for streaming to the recipient. The notice may appear in an "inbox" of the recipient's mobile device **110**. The notice may describe a multimedia content. Thus, the recipient may use the notice to determine whether to request the multimedia content.

[0030] At step **208**, a request including the unique pairing identifier is received from the recipient. To send the request, the recipient may use the mobile device **110** to click, tap, and/or otherwise enter the unique pairing identifier. For later retrieval, or for retrieval of multiple messages from the same sender, the recipient may use the unique pairing identifier to view a list of messages from the same sender, and then select the specific message to be streamed to the recipient.

[0031] At step **210**, the message is streamed to the recipient using bubble server **102**. The message may be stored on bubble server **102**. Using the unique pairing identifier, the recipient may repeat step **208** to request the message again.

[0032] A sender may create a notice describing a content **106** and send the notice to one or more recipients. In various embodiments, the content **106** may be streamed to the recipient.

ent on a subscription basis. Thus, the recipient may request the content **106** in advance of receiving the notice sent in step **206**.

[0033] The bubble server **102** may optionally provide confirmations to the sender. At step **206**, the bubble server **102** may provide a confirmation that a notice was sent to the recipient. At step **210**, the bubble server **102** may provide a confirmation that the message was streamed to the recipient. The confirmation may include information describing how much of the message was streamed to the recipient. After a period of time, the bubble server **102** may send a confirmation to the sender that the recipient has not requested the message.

[0034] The sender may associate a multimedia content from content **106** with the message, and the multimedia content may be streamed to the recipient as described herein with respect to step **210**. Furthermore, the multimedia content may be based on a demographic trait of the recipient, and/or may include advertising content.

[0035] FIG. 3 is a flow chart illustrating an exemplary method **300** for using sound icons. A sound icon may be any sound that is provided by the bubble server **102** to mobile devices **110** for the purpose of aiding the senders in the use of the system **100** (FIG. 1). In one example, a sound icon may be a verbal, or a non-verbal sound that the bubble server **102** provides to a mobile device **110** to prompt a sender to record a message intended for a recipient.

[0036] In step **302**, the sound icon may be based on a demographic trait of the sender, such as a female voice for a female sender, a sound in the language of the sender, and so forth.

[0037] In step **304**, the sound icon may be based on the previous activity of the sender. A sender that is familiar with the use of the system **100** may be provided with sound icons that are shortened or otherwise modified. A sender with several experiences with the system **100** may have familiarity with the system **100**, and may know expected responses without voice prompts. Thus, the length of the sound, or the type of sound used, could be based on the previous activity of the sender. For example, a sender with several experiences with the system **100** may use sound icons that shorten the amount of time needed to send messages.

[0038] In step **306**, the sound icon may be based on the intended recipient. Thus, the sound icon that the sender hears may be selected by the intended recipient. For example, an intended recipient may select a particular sound icon when the sender is a family member and a different sound icon when the sender is a friend.

[0039] In step **308**, the sound icon is sent to the sender to prompt the sender to record a message. For example, a “blub blub” sound icon may prompt a sender to record a message. Other examples of sound icons include a “dial tone” sound that may prompt a sender to enter a recipient’s telephone number or unique pairing identifier. A “slash” sound icon may alert the sender that a message could be deleted, was about to be deleted, or had been deleted. A “beep-beep-beep” sound icon may alert a user at the end of the message, or to select the next activity.

[0040] FIG. 4 is a flow chart illustrating an exemplary method **400** for distributing messages to mobile devices. At step **402**, bubble server **102** (FIG. 1) receives a message from a sender intended for a recipient. The message may be received using the telecommunication network (SMS/SVMS) **108**, and the message may be a SMS or SVMS message. The sender may use the mobile device **110** to send the message. The sender may alternatively use other communications networks, e.g., the internet, a telephone, and so forth to send the message intended for the recipient.

[0041] At step **404**, the message is stored using the bubble server **102**.

[0042] At step **406**, a message identifier is associated with the message. The message identifier is not based on the sender, and may be configured to distinguish the message from other messages intended for the recipient. The association of the message identifier with the message allows the recipient to request and stream the message each time the recipient requests the message via the message identifier.

[0043] At step **408**, the message identifier is sent to the recipient. The message identifier may be in the form of a notice.

[0044] At step **410**, the message is streamed to the recipient each time the recipient requests the message.

[0045] The message may be a short message service, i.e., text message, for example a SMS message or a SVMS message. A multimedia content provided by the content **106** may be associated with the message. The multimedia content may include, but is not limited to, audio content, e.g. music, electronic books, and other forms of audio entertainment content, as well as video content, voice messages, animation content, or other forms of content for communication, advertising, entertainment, etc. The multimedia content may be streamed to the recipient each time the recipient requests the message. The multimedia content may be advertising content, based on a demographic trait of the recipient, or the like.

[0046] FIG. 5 is a diagram illustrating unique pairing identifiers. As shown in FIG. 5, a recipient has a unique pairing identifier for each sender.

[0047] For example, the recipient at mobile device 4085551212 has three senders.

[0048] The unique pairing identifier of sender 6505551212 for this recipient is *21.

[0049] The unique pairing identifier of sender 9255551212 for this recipient is *22.

[0050] The unique pairing identifier of sender 8585551212 for this recipient is *23.

[0051] Thus, the recipient at mobile device 4085551212 may request the messages of each of the senders above using the sender’s unique pairing identifier instead of the sender’s telephone number.

[0052] FIG. 6 is a block diagram of the bubble server **102** in one exemplary implementation of the invention. The bubble server **102** comprises a processor **610**, a memory system **620**, a storage system **630**, an input/output (“I/O”) interface **640**, a communication network interface **650**, and a display interface **660** which may be coupled to a system bus **670**. The processor **610** is configured to execute executable instructions. In some embodiments, the processor **610** comprises circuitry or any processor capable of processing the executable instructions.

[0053] The memory system **620** may be any memory configured to store data. Some examples of the memory **620** are storage devices, such as RAM or ROM. The storage system **630** may be any storage configured to retrieve and store data. Some examples of the storage system **630** are flash drives, hard drives, optical drives, and/or magnetic tape. The storage system **630** may comprise the content **106**. In some embodiments, the bubble server **102** may include the memory system **620** in the form of RAM and the storage system **630** in the form of flash data.

[0054] The I/O interface **640** may be any device that can receive input for controlling and accessing the bubble server **102**. The I/O interface **640** may couple to a keyboard, touch-screen, mouse, keypad, printer, scanner, or any other input or output device.

[0055] The communication network interface 650 may be coupled to the communication network 104 and the telecommunication network 108 (FIG. 1) via the link 680. FIG. 6 shows a single link 680 for simplicity. However, bubble server 102 may include more than one of the link 680. Moreover, the communication network interface 650 may support communication over many kinds of connections, including, but not limited to, a USB connection, a firewire connection, an Ethernet connection, a serial connection, a parallel connection, or an ATA connection. The communication network interface 650 may also support wireless communication (e.g., 802.11 a/b/g/n, or wireless USB).

[0056] The display interface 660 is any device that may control a display device. A display device can be a monitor, screen, LCD, flatscreen, or any device configured to display information. The display device may be provided to control and access the bubble server 102.

[0057] The embodiments discussed herein are illustrative of the present invention. As these embodiments of the present invention are described with reference to illustrations, various modifications or adaptations of the methods and/or specific structures described may become apparent to those skilled in the art. All such modifications, adaptations, or variations that rely upon the teachings of the present invention, and through which these teachings have advanced the art, are considered to be within the spirit and scope of the present invention. Hence, these descriptions and drawings should not be considered in a limiting sense, as it is understood that the present invention is in no way limited to only the embodiments illustrated.

What is claimed is:

1. A method comprising:
receiving a message from a sender intended for a recipient,
the message received using a server;
assigning a unique pairing identifier for use by the recipient;
sending a notice to the recipient, the notice including the unique pairing identifier;
receiving a request from the recipient requesting the message, the request including the unique pairing identifier;
and
streaming the message to the recipient using the server.
2. The method of claim 1 further comprising streaming another message from the sender to the recipient based on the unique pairing identifier.
3. The method of claim 1 wherein the sender is coupled to a first telecommunication network, and the recipient is coupled to a second telecommunication network.
4. The method of claim 1 wherein the message is a short message service (SMS) message.
5. The method of claim 1 wherein the message is a short voice message service (SVMS) message.
6. The method of claim 1 wherein the message includes a multimedia content.
7. The method of claim 1 wherein the sender and the recipient are mobile devices.
8. The method of claim 1 further comprising sending a confirmation to the sender that the notice was sent to the recipient.
9. The method of claim 1 further comprising sending a confirmation to the sender, the confirmation including information describing how much of the message was streamed to the recipient.

10. The method of claim 1 further comprising sending a notice to the sender that the recipient has not requested the message.

11. The method of claim 1 further comprising:
associating a multimedia content and the message; and
streaming the multimedia content to the recipient.

12. The method of claim 11 wherein the multimedia content includes advertising content.

13. The method of claim 1 wherein the notice describes a multimedia content.

14. The method of claim 1 wherein the step of receiving the message from the sender includes sending a sound icon to prompt the sender to record the message.

15. The method of claim 14 wherein the sound icon is based on a demographic trait of the sender.

16. The method of claim 14 wherein the sound icon is based on a previous activity of the sender.

17. The method of claim 14 wherein the sound icon is based on the intended recipient.

18. A method comprising:
receiving a message intended for a recipient using a server;
storing the message on the server;
associating a message identifier with the message, the message identifier configured to distinguish the message from other messages intended for the recipient;
sending the message identifier to the recipient; and
streaming the message to the recipient each time the recipient requests the message, the request including the message identifier.

19. The method of claim 18 wherein the message is a short message service (SMS) message.

20. The method of claim 18 wherein the message is a short voice message service (SVMS) message.

21. The method of claim 18 wherein the message includes a multimedia content.

22. The method of claim 18 further comprising:
associating a multimedia content and the message; and
streaming the multimedia content to the recipient each time the recipient requests the message.

23. The method of claim 22 wherein the multimedia content includes advertising content.

24. The method of claim 22 wherein the multimedia content is based on a demographic trait of the recipient.

25. The method of claim 18 wherein the step of receiving the message includes sending a sound icon to prompt a sender to record the message.

26. The method of claim 25 wherein the sound icon is based on a demographic trait of the sender.

27. The method of claim 25 wherein the sound icon is based on a previous activity of the sender.

28. A computer readable medium having embodied thereon a program, the program being executable by a computing device for performing a method comprising:

receiving a message from a sender intended for a recipient,
the message received using the computing device;
assigning a unique pairing identifier for use by the recipient;
sending a notice to the recipient, the notice including the unique pairing identifier;
receiving a request from the recipient requesting the message, the request including the unique pairing identifier;
and
streaming the message to the recipient using the computing device.

* * * * *