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(54) **ENHANCED MESSAGING USING ENVIRONMENTAL INFORMATION**

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See application file for complete search history.

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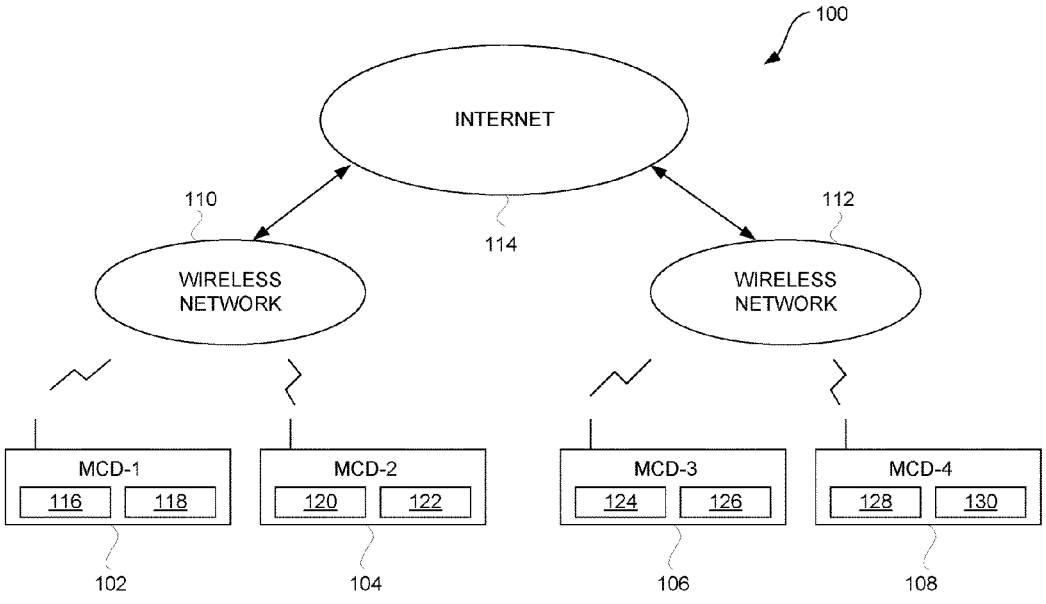
(57) **ABSTRACT**

Techniques for acquiring, sending, receiving or using status information from a remote location over a network are disclosed. The status information is transmitted over the network between or among electronic devices. The status information can be provided by one or more sensors associated with the electronic device that is transmitting the status information. The status information can be transmitted with messages so as to enhance the messages. On receipt, the status information can be presented in an audio manner. The electronic devices include at least computing devices, such as computers, personal digital assistants, pagers, and mobile telephones.

30 Claims, 7 Drawing Sheets



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continuation of application No. 15/686,960, filed on Aug. 25, 2017, now Pat. No. 9,998,886, which is a continuation of application No. 15/457,978, filed on Mar. 13, 2017, now Pat. No. 9,769,630, which is a continuation of application No. 15/272,559, filed on Sep. 22, 2016, now Pat. No. 9,596,579, which is a continuation of application No. 14/727,798, filed on Jun. 1, 2015, now Pat. No. 9,456,350, which is a continuation of application No. 13/802,594, filed on Mar. 13, 2013, now Pat. No. 9,049,571, which is a continuation of application No. 13/459,025, filed on Apr. 27, 2012, now Pat. No. 8,447,822, which is a continuation of application No. 13/113,972, filed on May 23, 2011, now Pat. No. 8,176,135, which is a continuation of application No. 12/214,434, filed on Jun. 19, 2008, now Pat. No. 7,953,809, which is a continuation of application No. 10/397,474, filed on Mar. 26, 2003, now Pat. No. 7,403,972.

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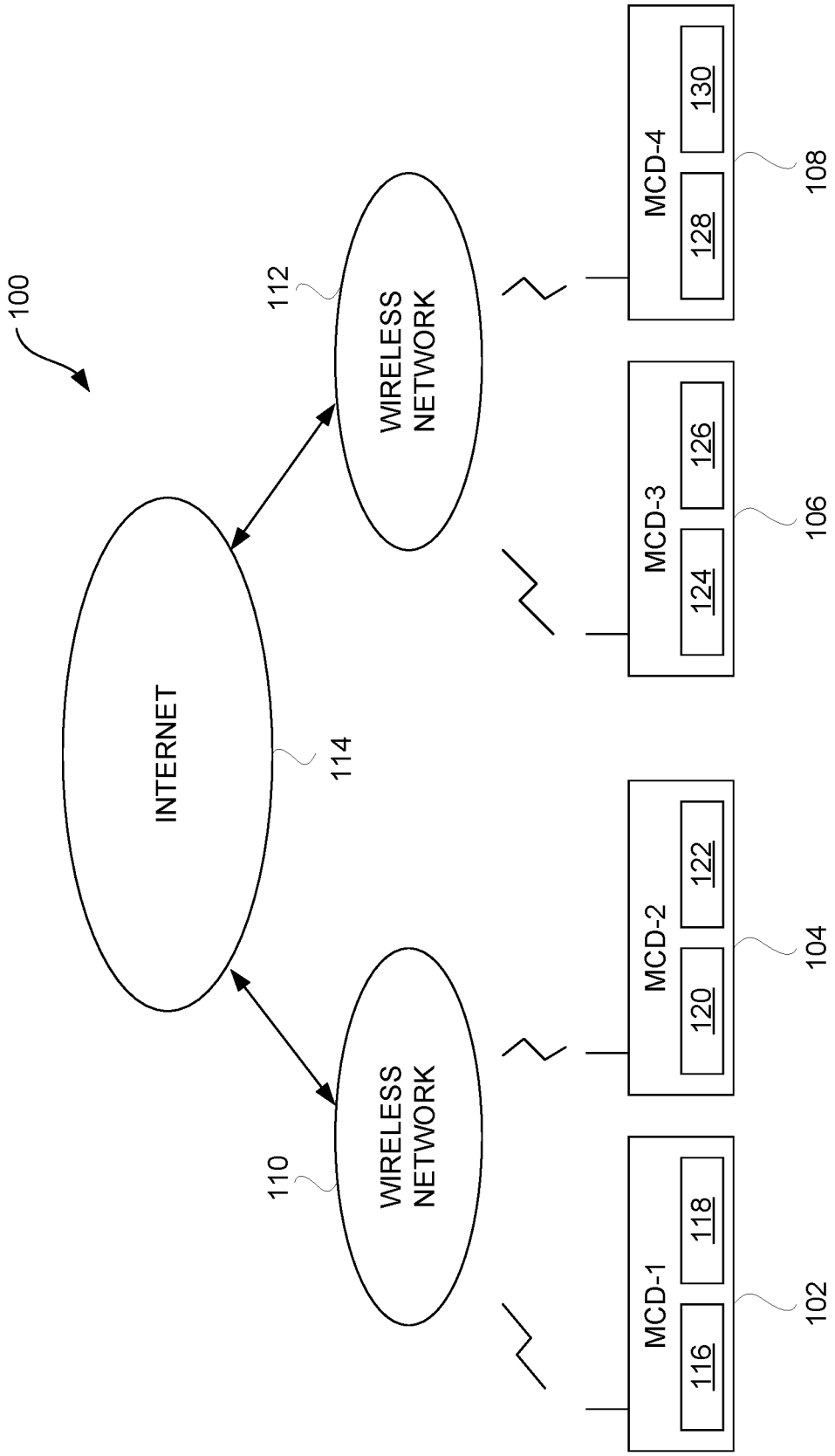
100
INTERNET
114
WIRELESS NETWORK
110
WIRELESS NETWORK
112
MCD-1
116
118
102
MCD-2
120
122
104
MCD-3
124
126
106
MCD-4
128
130
108

FIG. 1

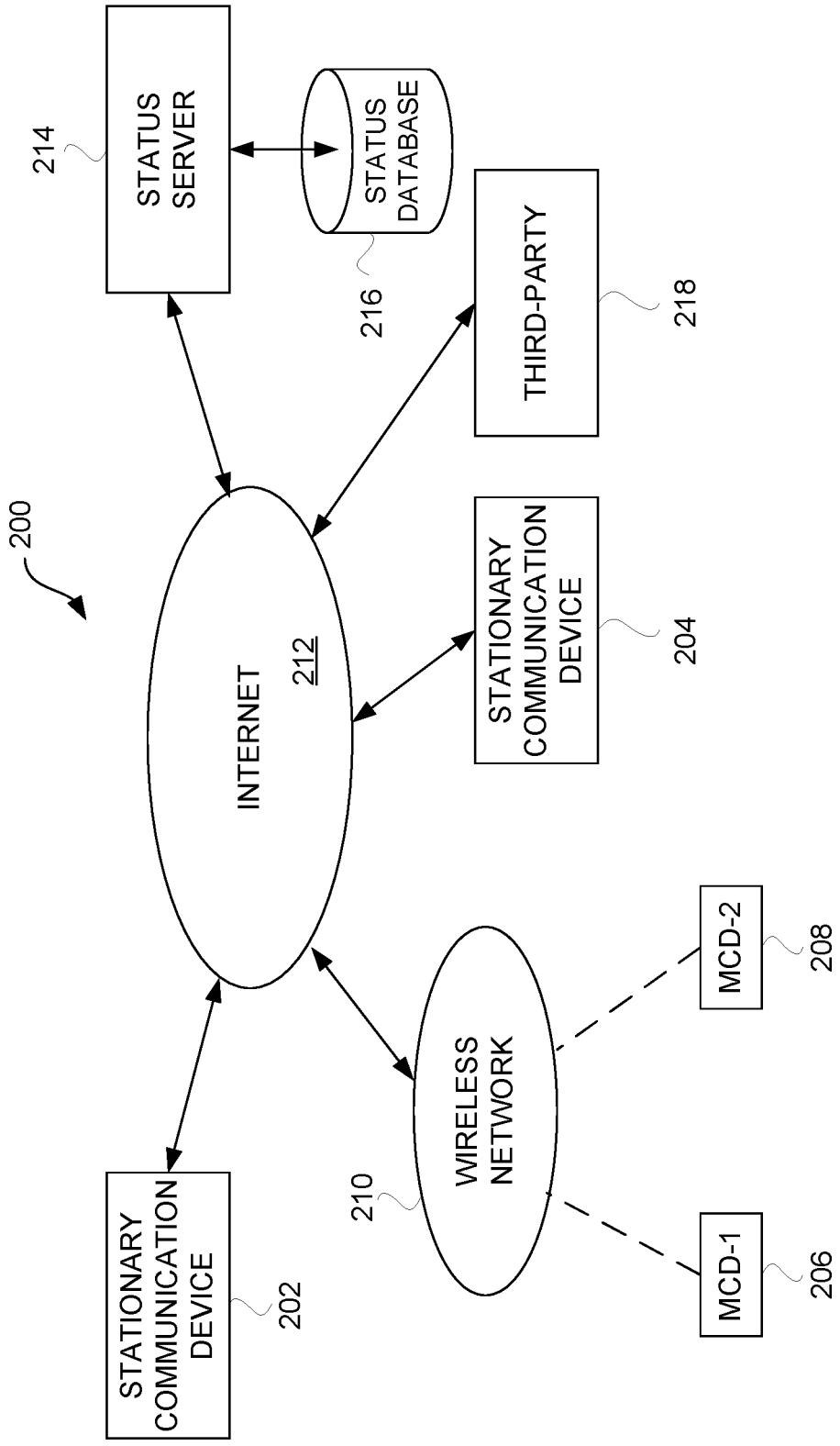
200
INTERNET
212
STATUS SERVER
214
STATUS DATABASE
216
THIRD-PARTY
218
STATIONARY COMMUNICATION DEVICE
204
STATIONARY COMMUNICATION DEVICE
202
WIRELESS NETWORK
210
MCD-2
208
MCD-1
206

FIG. 2

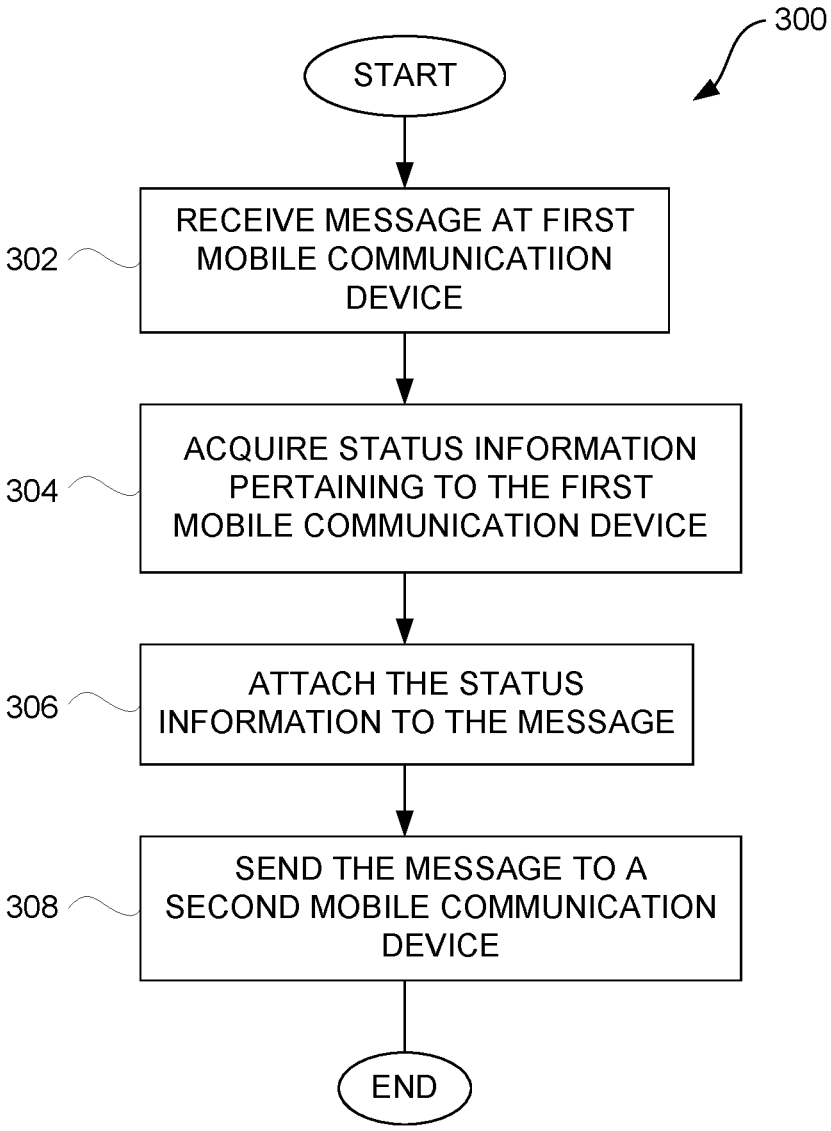
300
START
RECEIVE MESSAGE AT FIRST MOBILE COMMUNICATIION DEVICE
302
ACQUIRE STATUS INFORMATION PERTAINING TO THE FIRST MOBILE COMMUNICATION DEVICE
304
ATTACH THE STATUS INFORMATION TO THE MESSAGE
306
SEND THE MESSAGE TO A SECOND MOBILE COMMUNICATION DEVICE
308
END

FIG. 3

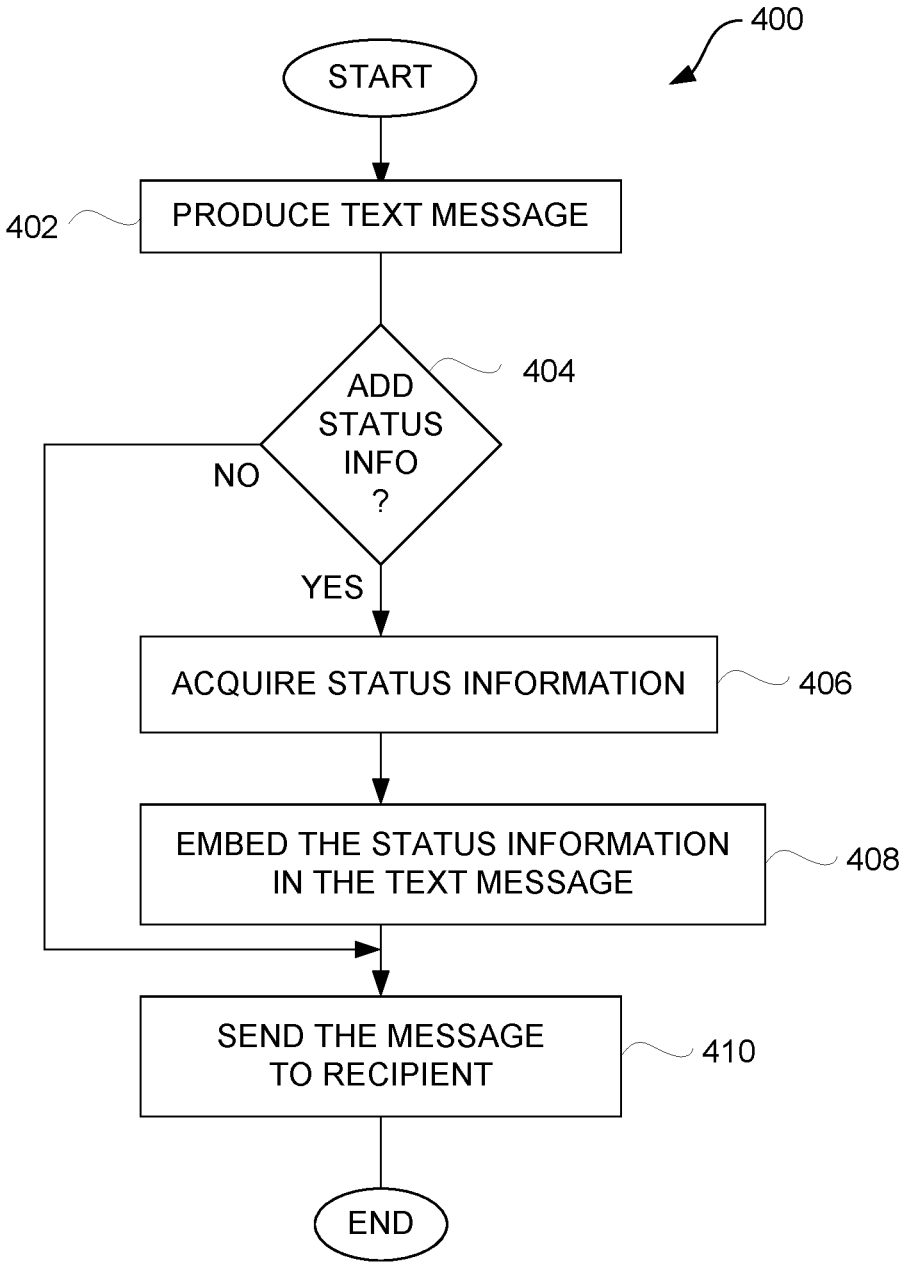
400
START
402
PRODUCE TEXT MESSAGE
404
ADD STATUS INFO ?
NO
YES
ACQUIRE STATUS INFORMATION
406
EMBED THE STATUS INFORMATION IN THE TEXT MESSAGE
408
SEND THE MESSAGE TO RECIPIENT
410
END

FIG. 4

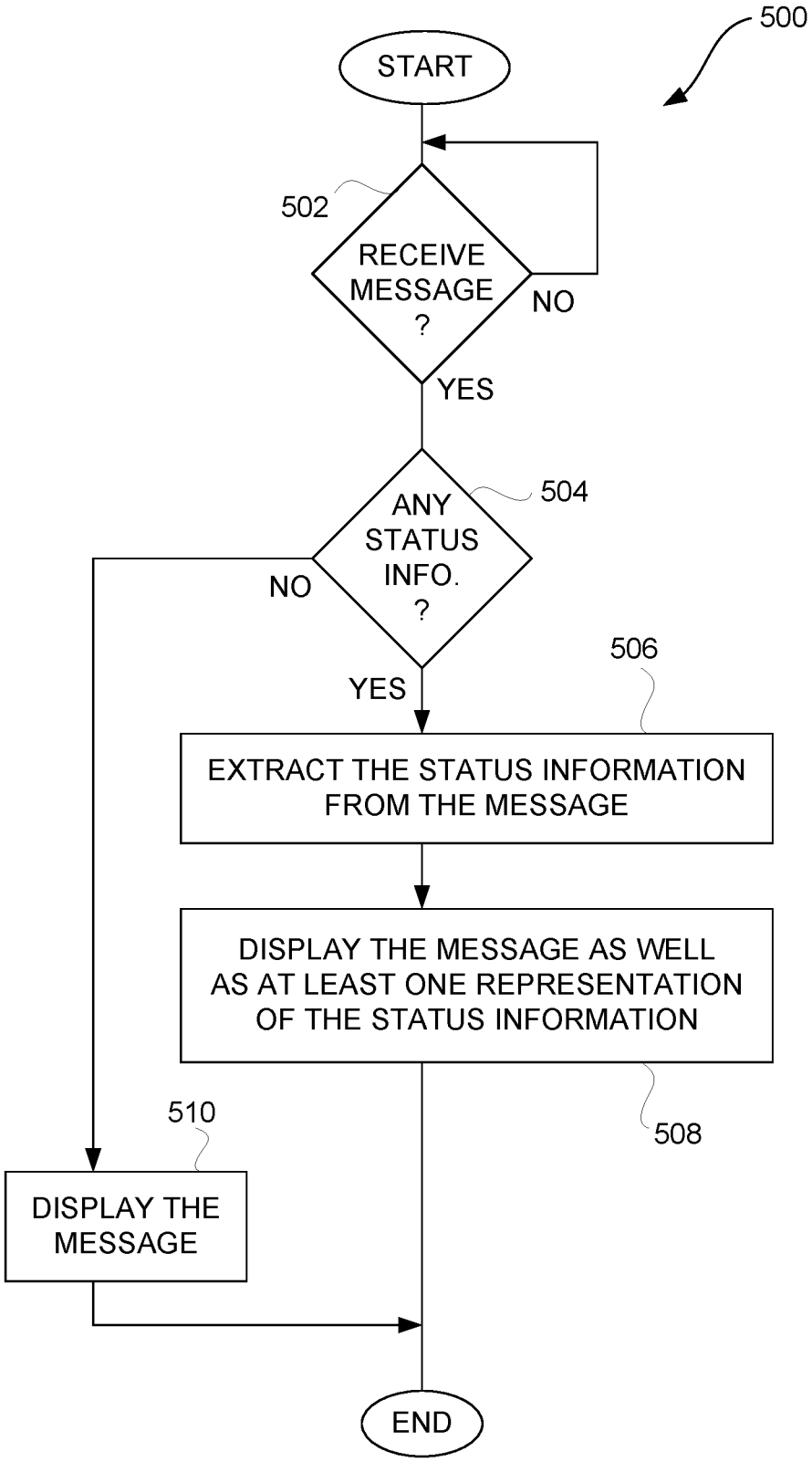
500
START
502
RECEIVE MESSAGE ?
NO
YES
504
ANY STATUS INFO. ?
NO
YES
506
EXTRACT THE STATUS INFORMATION FROM THE MESSAGE
DISPLAY THE MESSAGE AS WELL AS AT LEAST ONE REPRESENTATION OF THE STATUS INFORMATION
508
510
DISPLAY THE MESSAGE
END

FIG. 5

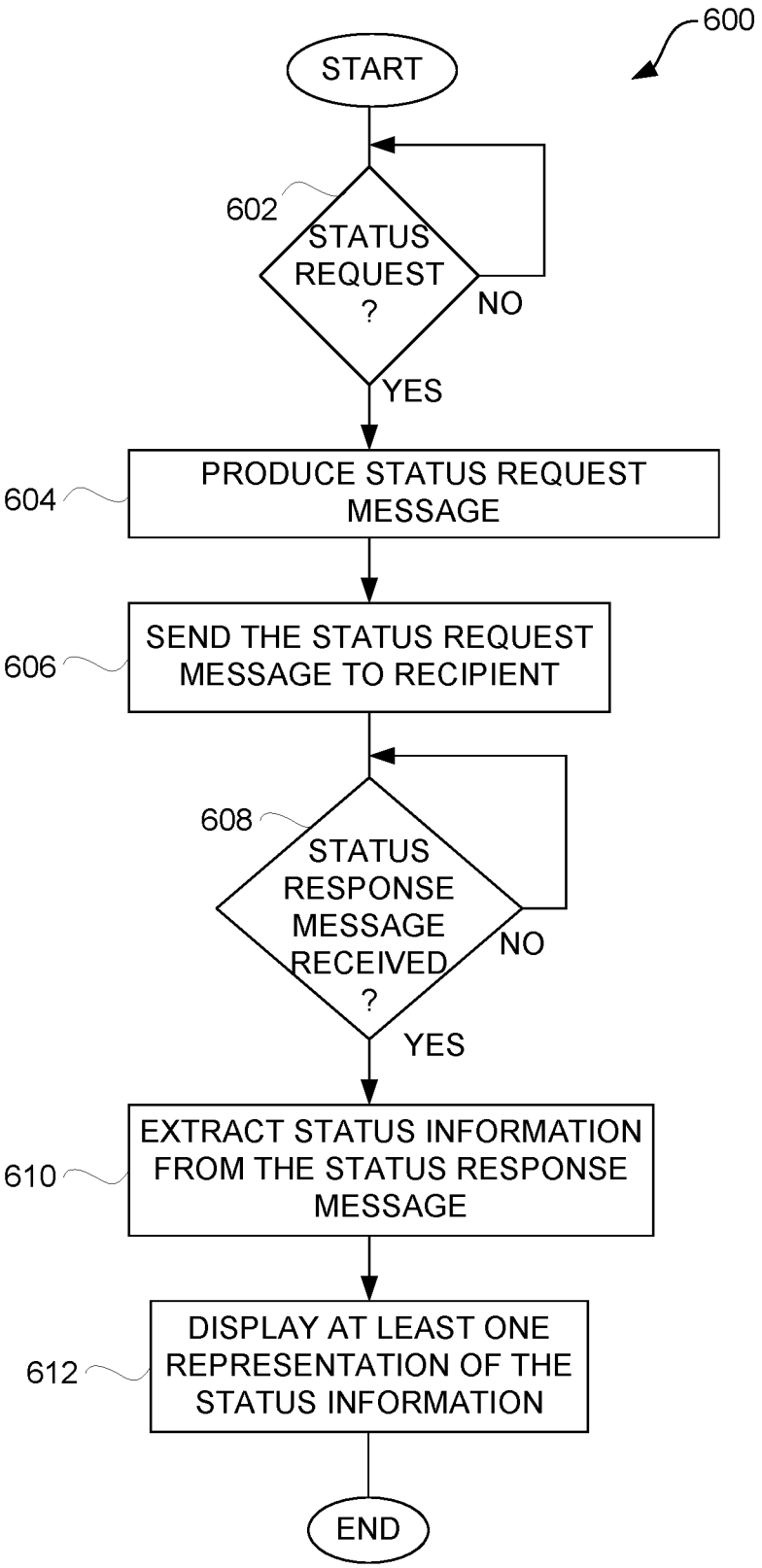
600
START
602
STATUS REQUEST ?
NO
YES
604
PRODUCE STATUS REQUEST MESSAGE
606
SEND THE STATUS REQUEST MESSAGE TO RECIPIENT
608
STATUS RESPONSE MESSAGE RECEIVED ?
NO
YES
610
EXTRACT STATUS INFORMATION FROM THE STATUS RESPONSE MESSAGE
612
DISPLAY AT LEAST ONE REPRESENTATION OF THE STATUS INFORMATION
END

FIG. 6

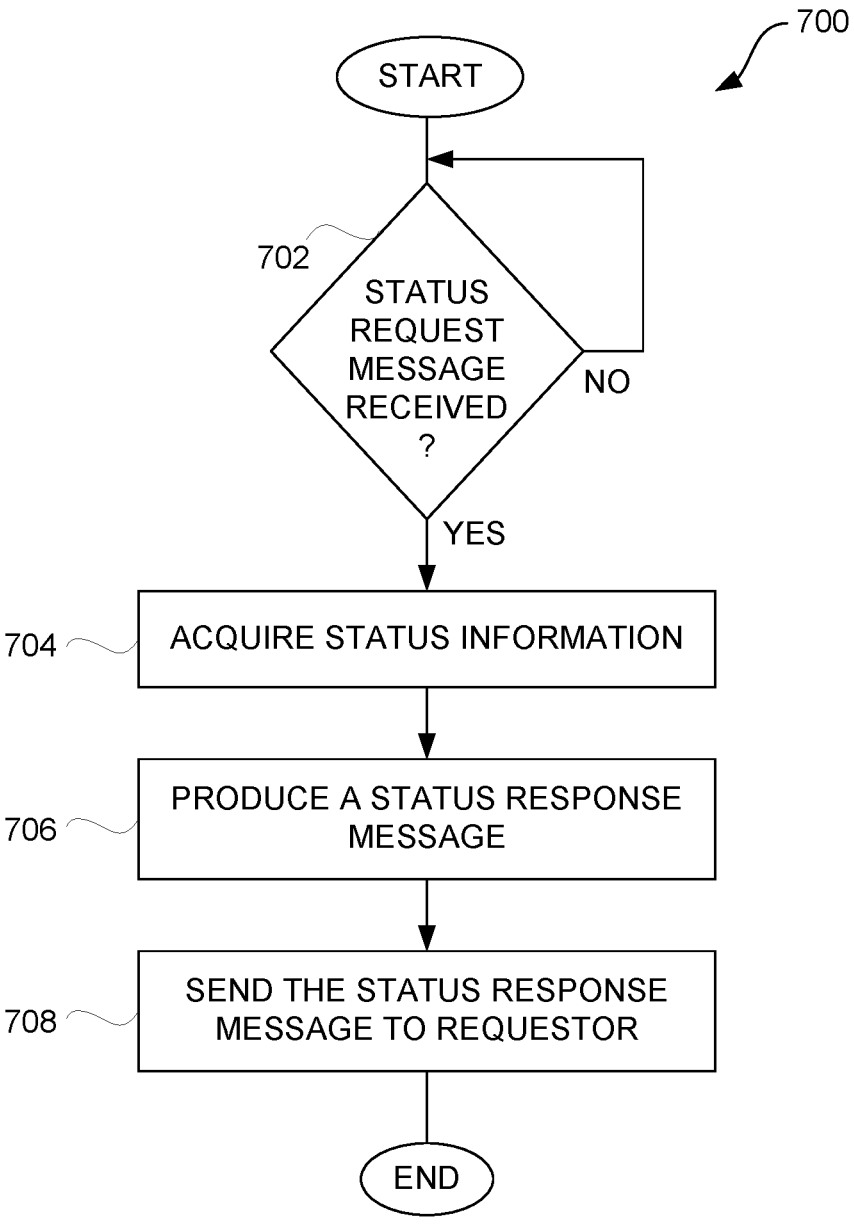
700
START
702
STATUS REQUEST MESSAGE RECEIVED ?
NO
YES
704
ACQUIRE STATUS INFORMATION
706
PRODUCE A STATUS RESPONSE MESSAGE
708
SEND THE STATUS RESPONSE MESSAGE TO REQUESTOR
END

FIG. 7

ENHANCED MESSAGING USING ENVIRONMENTAL INFORMATION

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. patent application Ser. No. 15/722,870, filed Oct. 2, 2017, and entitled "AUDIO ENHANCED MESSAGING," which is hereby incorporated by reference, which in turn is a continuation of U.S. patent application Ser. No. 15/686,960, filed Aug. 25, 2017, and entitled "METHOD AND SYSTEM FOR ENHANCED MESSAGING USING EMOTIONAL AND LOCATIONAL INFORMATION," which is hereby incorporated by reference, which in turn is a continuation of U.S. patent application Ser. No. 15/457,978, filed Mar. 13, 2017, and entitled "METHOD AND SYSTEM FOR ENHANCED MESSAGING USING EMOTIONAL INFORMATION," (now U.S. Pat. No. 9,769,630) which is hereby incorporated by reference, which in turn is a continuation of U.S. patent application Ser. No. 15/272,559, filed Sep. 22, 2016, and entitled "METHOD AND SYSTEM FOR ENHANCED MESSAGING," (now U.S. Pat. No. 9,596,579), which is hereby incorporated by reference, which in turn is a continuation of U.S. patent application Ser. No. 14/727,798, filed Jun. 1, 2015, and entitled "METHOD AND SYSTEM FOR ENHANCED MESSAGING," (now U.S. Pat. No. 9,456,350), which is hereby incorporated by reference, which in turn is a continuation of U.S. patent application Ser. No. 13/802,594, filed Mar. 13, 2013, and entitled "METHOD AND SYSTEM FOR ENHANCED MESSAGING," (now U.S. Pat. No. 9,049,571), which is hereby incorporated by reference, which in turn is a continuation of U.S. patent application Ser. No. 13/459,025, filed Apr. 27, 2012, and entitled "METHOD AND SYSTEM FOR ENHANCED MESSAGING," (now U.S. Pat. No. 8,447,822), which is hereby incorporated by reference, which in turn is a continuation of U.S. patent application Ser. No. 13/113,972, filed May 23, 2011, and entitled "METHOD AND SYSTEM FOR ENHANCED MESSAGING," (now U.S. Pat. No. 8,176,135), which is hereby incorporated by reference, which in turn is a continuation of U.S. patent application Ser. No. 12/214,434, filed Jun. 19, 2008, and entitled "METHOD AND SYSTEM FOR ENHANCED MESSAGING," (now U.S. Pat. No. 7,953,809), which is hereby incorporated herein by reference, which in turn is a continuation of U.S. patent application Ser. No. 10/397,474, filed Mar. 26, 2003, and entitled "METHOD AND SYSTEM FOR ENHANCED MESSAGING," (now U.S. Pat. No. 7,403,972), which is hereby incorporated herein by reference, and which in turn claims benefit of: (i) U.S. Provisional Patent Application No. 60/444,198, filed Jan. 30, 2003, and entitled "SYSTEM, METHOD AND APPARATUS FOR ACQUIRING, PRESENTING, MONITORING, DELIVERING, MANAGING AND USING STATUS INFORMATION," which is hereby incorporated herein by reference; (ii) U.S. Provisional Patent Application No. 60/418,491, filed Oct. 15, 2002, and entitled "SYSTEM, METHOD AND APPARATUS FOR ACQUIRING, PRESENTING, MONITORING, DELIVERING, MANAGING AND USING STATUS INFORMATION," which is hereby incorporated herein by reference; (iii) U.S. Provisional Patent Application No. 60/404,645, filed Aug. 19, 2002, and entitled "SYSTEM, METHOD AND APPARATUS FOR ACQUIRING, PRESENTING, MONITORING, DELIVERING, MANAGING AND USING POSITION AND OTHER INFORMATION," which is hereby incorporated herein by reference; and (iv) U.S. Provisional Patent Application No. 60/375,998, filed Apr. 24, 2002, and entitled "SYSTEM, METHOD AND APPARATUS FOR ACQUIRING, PRESENTING, MANAGING AND USING POSITION INFORMATION," which is hereby incorporated herein by reference.

This application is also related to: (i) U.S. patent application Ser. No. 10/397,473, filed Mar. 26, 2003, and entitled "METHOD AND APPARATUS FOR INTELLIGENT ACQUISITION OF POSITION INFORMATION," (now U.S. Pat. No. 6,975,941); (ii) U.S. patent application Ser. No. 10/397,472, filed Mar. 26, 2003, and entitled "METHODS AND APPARATUS TO ANALYZE AND PRESENT LOCATION INFORMATION," (now U.S. Pat. No. 7,218,938); (iii) U.S. patent application Ser. No. 10/397,637, filed Mar. 26, 2003, and entitled "METHOD AND SYSTEM FOR PROVIDING SHIPMENT TRACKING AND NOTIFICATIONS," (now U.S. Pat. No. 7,212,829); (iv) U.S. patent application Ser. No. 10/397,641, filed Mar. 26, 2003, and entitled "METHOD AND SYSTEM FOR PERSONALIZED MEDICAL MONITORING AND NOTIFICATIONS THEREFOR," (now U.S. Pat. No. 7,905,832); (v) U.S. patent application Ser. No. 10/397,640, filed Mar. 26, 2003, and entitled "INEXPENSIVE POSITION SENSING DEVICE," (now U.S. Pat. No. 7,321,774); (vi) U.S. patent application Ser. No. 10/397,512, filed Mar. 26, 2003, and entitled "APPLICATIONS OF STATUS INFORMATION FOR INVENTORY MANAGEMENT."

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to communication devices and, more particularly, to enhanced messaging for communication devices.

2. Description of the Related Art

Today, electronic mail (email) is a common mode of communication. One person, acting as a sender, composes an email message and then sends the email message to another person designated as a recipient. The sender composes the email message by interacting with a communication device. The recipient is able to read the email message by interacting with another communication device. Communication devices are often personal computers or mobile telephones. These communication devices can receive and transmit electronic mail messages over a network. The network can be public or private as well as wired or wireless.

Although email is an effective means of communication, when a sender is using a mobile telephone, composing an email message can be tedious and difficult. User interfaces can provide limited assistance to users such as by creating email messages through word prediction, predetermined responses, etc. Nevertheless, given the difficulties with composing messages, email messages from mobile telephones in most cases are relatively short. Recently, communication devices, including mobile telephones, have been able to send and receive instant messages, which are short text messages sent and received in near real time between communication device.

Apart from sending and receiving email messages, mobile telephones can also display the location or availability (i.e., online or offline) of other users via their mobile telephones. This information is provided by a wireless service provider that monitors location or availability of users via their

mobile phones. Unfortunately, such information needs the assistance of wireless service providers and tends not to be widely available. Moreover, if such information is available, the information would very likely not be current and thus the usefulness of the information would be limited.

Thus, there is a need for improved approaches to enhance the capabilities of messaging.

SUMMARY

Broadly speaking, the invention relates to techniques for acquiring, sending, receiving or using status information from a remote location over a network. The status information is transmitted by electronic devices over the network. The status information can be provided by one or more sensors associated with the electronic device that is transmitting the status information. The status information can be transmitted with messages so as to enhance the messages.

According to one aspect of the invention, base messages are entered by a user or automatically produced. The base messages can be text messages (including instant messages), voice messages, video messages or other types of messages. The base messages are augmented to additionally include status information, such as position and/or other conditions information. The status information is normally provided by one or more sensors. In one implementation, base messages can be combined with status information, whereby the resulting messages are referred to as enhanced messages. These enhanced messages are electronically sent from and received at electronic devices, such as personal computers and mobile communication devices.

The invention can be implemented in numerous ways including, a method, system, device, graphical user interface, and a computer readable medium. Several embodiments of the invention are discussed below.

As a method to facilitate communication among users of mobile electronic devices user communication system for communicating between users of mobile communication devices, one embodiment of the invention can, for example, include at least the acts of: receiving message content for a text message via the first mobile electronic device; acquiring status information of the first mobile electronic device, the status information including at least position information associated with the first mobile electronic device; determining a plurality of other mobile electronic devices or users thereof that are authorized to receive the message content and the status information; determining whether at least one user selection has been provided via the first mobile communication device to indicate whether the status information is to be provided with the text message, and initiating sending of the text message including the message content along with the status information to each of the plurality of other mobile electronic devices via a wireless network, provided that it is determined that the status information is to be provided with the text message and provided that the plurality of other mobile electronic devices or users thereof are authorized to receive the text message.

As a computer readable medium including at least computer program code tangible stored thereon for facilitating communication among users of mobile electronic devices, one embodiment of the invention can, for example, include at least: computer program code for receiving message content for a text message via the first mobile electronic device; computer program code for acquiring status information of the first mobile electronic device, the status information including at least position information regarding position of the first mobile electronic device; computer program code for determining a plurality of other mobile electronic devices or users thereof that are authorized to receive the status information; computer program code for determining whether at least one indication has been received from the first mobile communication device to influence whether the status information is to be provided with the text message; computer program code for determining based at least in part on the at least one indication whether the status information is to be provided with the text message, and computer program code for initiating sending of the text message along with the status information to each of the plurality of other mobile electronic devices via at least one wireless network, provided that it is determined that the status information is to be provided with the text message and provided that the plurality of other mobile electronic devices or users thereof are authorized to receive the status information.

As a method for providing communications between computing devices, another embodiment of the invention includes at least the acts of: obtaining a message at a first mobile communication device to be delivered to a second mobile communication device; determining whether status information is to accompany the message; sending the message without any status information when it is determined that status information is not to accompany the message; and acquiring status information at the first mobile communication device and then sending the message and the status information to the second mobile communication device when it is determined that status information is to accompany the message.

As a method for displaying a message on a display device of a computing device, one embodiment of the invention includes at least the acts of: receiving a message from another computing device over a network; determining whether the message includes at least status information; extracting the status information from the message when it is determined that the message includes at least the status information; and displaying the message and at least one representation of the status information on the display device following the extracting when it is determined that the message includes at least the status information.

As a method for displaying a message on a display device of a computing device, another embodiment of the invention includes at least the acts of: receiving a message from another computing device over a network; determining whether the message includes at least status information; extracting the status information from the message when it is determined that the message includes at least the status information; and displaying the message and at least one representation of the status information on the display device following the extracting when it is determined that the message includes at least the status information.

Other aspects and advantages of the invention will become apparent from the following detailed description taken in conjunction with the accompanying drawings which illustrate, by way of example, the principles of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be readily understood by the following detailed description in conjunction with the accompanying drawings, wherein like reference numerals designate like structural elements, and in which:

FIG. **1** is a block diagram of an enhanced messaging system according to one embodiment of the invention.

FIG. **2** is a block diagram of an enhanced messaging system according to another embodiment of the invention.

FIG. **3** is a flow diagram of status message processing according to one embodiment of the invention.

FIG. **4** is a flow diagram of send processing according to one embodiment of the invention.

FIG. **5** is a flow diagram of display processing according to one embodiment of the invention.

FIG. **6** is a flow diagram of status retrieval processing according to one embodiment of the invention.

FIG. **7** is a flow diagram of status request processing according to one embodiment of the invention.

DETAILED DESCRIPTION OF THE INVENTION

The invention relates to techniques for acquiring, sending, receiving or using status information from a remote location over a network. The status information is transmitted over the network between or among electronic devices. The status information can be provided by one or more sensors associated with the electronic device that is transmitting the status information. The status information can be transmitted with messages so as to enhance the messages. The electronic devices include at least computing devices, such as personal computers, personal digital assistants, pagers, and mobile telephones.

According to one aspect of the invention, messages are enhanced through use of status information. Base messages are entered by a user or automatically produced. The base messages can be text messages (including instant messages), voice messages, video messages or other types of messages. The base messages are augmented to additionally include status information, such as position and/or other conditions information. The status information is normally provided by one or more status sensors. In one implementation, base messages can be combined with status information, whereby the resulting messages are referred to as enhanced messages. These enhanced messages are electronically sent from and received at communication devices, such as personal computers and mobile communication devices.

Different embodiments of the invention are discussed below with reference to FIGS. **1-7**. However, those skilled in the art will readily appreciate that the detailed description given herein with respect to these figures is for explanatory purposes as the invention extends beyond these limited embodiments.

According to one aspect of the invention, traditional messages transmitted between communication devices are augmented to additionally include status information, such as position and/or conditions information. The conditions information can pertain to one or more of environmental conditions, device-related conditions, or user-related conditions. One or more status sensors associated with the communication devices can capture or obtain the status information. In the case of position information, the status sensor can be a receiver, such as a Global Positioning System (GPS) receiver or other means.

FIG. **1** is a block diagram of an enhanced messaging system **100** according to one embodiment of the invention. The enhanced messaging system **100** allows electronic messages (e.g., text messages) to be sent between mobile communication devices. The electronic messages being sent can be enhanced to include status information pertaining to (i) status of the associated mobile communication devices, (ii) status associated with the environment of the mobile communication devices, and/or (iii) status of the person(s) using the mobile communication device(s).

The enhanced messaging system **100** includes mobile communication devices **102**, **104**, **106** and **108**. The mobile communication devices **102** and **104** communicate with a wireless network **110**, and the mobile communication devices **106** and **108** communicate with a wireless network **112**. The wireless networks **110** and **112** can be the same or different networks and can utilize same or different protocols. The wireless networks **110** and **112** can be coupled together and/or can couple to the Internet **114**, and can support global messaging.

The enhanced messages are sent from one of the mobile communication devices to one or more other of the mobile communication devices. These enhanced messages can include additional information about the mobile communication device, its user and/or its environment. In one embodiment, the status information can include at least position (location) information and other status information. To provide the status information, the mobile communication devices **102**, **104**, **106** and **108** can include one or more status sensors, such as position detectors, and/or one or more other types of condition sensors for different conditions regarding the communication devices. A position detector can provide position information pertaining to its corresponding mobile communication device. Similarly, a condition sensor provides condition information pertaining to conditions sensed at the corresponding mobile communication device. More particularly, the mobile communication device **102** includes a position detector **116** and at least one condition sensor **118**; the mobile communication device **104** includes a position detector **120** and at least one condition sensor **122**; the mobile communication device **106** includes a position detector **124** and at least one condition sensor **126**; and the mobile communication device **108** includes a position detector **128** and at least one condition sensor **130**.

In one embodiment, the position information is obtained from a global positioning system (GPS) receiver, which can be in a mobile communication device. In other words, the position detector can be a GPS receiver. The position information can be obtained or augmented by a local positioning system such as utilized with a local network (e.g., Bluetooth, Wi-Fi, etc.). The conditions information can vary with application. Examples of conditions that can be provided within the conditions information include environment conditions or conditions of the environment of the corresponding mobile communication device. Environment conditions include temperature, humidity, pressure, gaseous or liquid states, chemical compositions, wind speed, color composition, scent, light, sound, smoke, particle or radiation (e.g., infrared radiation). The conditions information can be pertaining to a mobile communication device itself, such as force or pressure asserted on it, or its vibration, acceleration, speed (velocity) or direction. The conditions information can also include user-related conditions. These are conditions related to the user, who is typically a living being and who may be using the corresponding mobile communication device. Examples of user-related conditions include the being's physical conditions (e.g., heart beat, temperature, pupil dilation, hunger, perspiration, tired or sick), volitional behavior (e.g., facial expressions, jumping or moving), or the user's emotional state, such as the user's mood. Examples of emotional states or moods include sad, happy, mad, stressed, or excited. Some of these conditions are not determined directly by sensors, but are instead determined indirectly through processing other sensor data.

In one embodiment, an enhanced messaging system can operate in a distributed manner with little or no centralized management for status information exchange. In other

words, the exchange of status information can be peer-to-peer (e.g., from one mobile communication device to another) without an intermediate centralized server to store and manage distribution of the status information. Such an embodiment can operate without assistance from wireless networks service providers. The enhanced messaging system **100** shown in FIG. **1** is suitable for use as such an embodiment.

In another embodiment, an enhanced messaging system can operate in a centralized manner, such as shown below in FIG. **2**. In the case of a centralized system, or at least one providing centralized assistance, the status information can be stored and/or processed by a separate entity, independent of the parties sending and receiving information.

FIG. **2** is a block diagram of an enhanced messaging system **200** according to one embodiment of the invention. The enhanced messaging system **200** provides web-based enhanced messaging between users of communication devices. The enhanced messages being sent from one of the communication devices to one or more other of the communication devices. These enhanced messages can include additional information pertaining to a communication device, its user and/or its environment. In one embodiment, the status information can include at least position (location) information and conditions information.

According to the embodiment shown in FIG. **2**, the enhanced messaging system **200** includes stationary communication devices **202** and **204**. The enhanced messaging system **200** also includes mobile communication devices (MCD) **206** and **208**. Typically, the mobile communication devices **206** and **208** are worn by, affixed to or carried by users. The enhanced messaging system **200** would normally be able to support multiple stationary communication devices, such as desktop computers, and mobile communication devices, such as mobile telephones, personal digital assistants and two-way pagers.

In general, messages can be transmitted (sent and/or received) between and/or among any of the communication devices, regardless of whether stationary or mobile. For discussion, it is assumed that a message is created and sent from the mobile communication device **206** to the stationary communication device **204**. The message is assumed to be a text message, such as a real-time text message (e.g., instant message). In this example, the mobile communication device **206** acquires status information pertaining to the user, the device and/or the environment. The acquired status information is provided to the stationary communication device **204** along with the message.

The mobile communication devices **206** and **208** couple to a wireless network **210**. The wireless network **210** couples to the Internet **212**. Further, a status server **214** is coupled to the Internet **212**. The status server **214** also couples to a status database **216**. The Internet **212** can be replaced by other data networks (e.g., enterprise network, regional network, Local Area Network, Wide Area Network and global network).

The status information can include at least position (location) information and conditions information. The position information is obtained typically from a global positioning system (GPS) receiver within the first mobile communication device **206**. The position information can be obtained or augmented by a local positioning system such as utilized with a local network (e.g., Bluetooth, Wi-Fi, etc.).

The conditions information can vary with application. Various examples of conditions that can be provided within the conditions information were noted above. The corresponding conditions sensor(s) can also be in the mobile communication device **206**, or the sensor(s) can be wired or wirelessly coupled to the mobile communication device **206**.

The status information that is obtained by the first mobile communication device **206** is sent by the first mobile communication device **206** to the status server **214** via the wireless network **210** and the Internet **212**. The status server **214** stores the status information pertaining to the first mobile communication device **206** into the status database **216** such that it is associated with the first mobile communication device **206**. The status server **214** monitors status information for numerous communication devices, including mobile communications devices and/or stationary communication device, and thus stores status information pertaining to numerous communication devices.

The enhanced messaging system **200** can also include at least one third-party **218**. The third-party **218** is a user interested in status information acquired by mobile communication devices but does not normally receive the text messages also being sent.

The enhanced messaging system **200** can allow a recipient of the message to not only receive the text of the message but also the status information associated with the message. In one embodiment, the recipient receives the status information with the message. The recipient of the message can, for example, include one or more of the mobile communication devices **206** and **208** or one or more of the stationary communication devices **202** and **204**, or users thereof. In another embodiment, an authorized party, such as the user of the stationary communication devices **202** and **204** or the third-party **218**, can interact with the status server **214** through a web interface so that such users are able to access certain status information via the status server **214** and the status database **216**. The web interface can facilitate a user in accessing status information anytime anywhere.

FIG. **3** is a flow diagram of status message processing **300** according to one embodiment of the invention. The status message processing **300** is, for example, performed by a mobile communication device (e.g., mobile telephone, two-way pager) or other computing device (e.g., desktop computer, gateway, server).

Initially, the status message processing **300** receives **302** a message at a first mobile communication device. For example, a user of the mobile communication device would typically interact with the mobile communication device (e.g., through a user interface) to create the message. Hence, in this embodiment, the message is considered to be a user-entered message. The user-entered message can be a voice message, a text message, a video message or some other type of input, or some combination thereof. A text message is, for example, a standard email message, a short message (e.g., SMS message) or an instant message. Status information pertaining to the first mobile communication device (and/or its user or environment) can be acquired **304**. As noted above, in one embodiment, the status information can include at least position (location) information and/or conditions information. Some or all of the status information can then be attached **306** to the user-entered message. In one embodiment, at least some of the status information has been processed before attachment. The processed status information is still considered as status information. With the status information attached **306** to the user-entered message, the user-entered message becomes an enhanced message. The enhanced message is then sent **308** from the first mobile communication device to another electronic device, such as a second mobile communication device (e.g., mobile telephone, personal digital assistant, or pager) or other computing device (e.g., portable or stationary computer). Typically,

the sending of the enhanced message involves electronic transmission of the enhanced message over a wireless network as well as perhaps a wired network. Although the enhanced message is often sent from one mobile communication device to another mobile communication device, the message can alternatively be sent to another computing device, such as a personal computer coupled to the network. Following the operation **308**, the status message processing **300** is complete and ends.

FIG. **4** is a flow diagram of send processing **400** according to one embodiment of the invention. The send processing **400** is, for example, performed by a mobile communication device or other computing device.

The send processing **400** initially produces **402** a message. In this embodiment, the message is a user-entered message such as a text message. The text message can, for example, be produced or initiated by a user of the mobile communication device or other computing device. However, in other embodiment, the message can be a voice message or a video message.

A decision **404** then determines whether status information is to be added to the text message. The decision **404** allows the user to limit or restrict the status information that is sent to others. For example, the user might restrict the status information such that it can only be sent to authorized persons or destinations. The restrictions can be imposed by a profile or configuration information associated with the user. In one implementation, a user can make use of a list of recipients permitted to receive status information (e.g., pre-authorized recipients). As another example, a dialog box (or other graphical user interface) could be displayed to allow the user to select none, some or all of the available status information to be sent generally with all text messages, or specifically with a particular text message. As still another example, default authorizations can control the status information that is to be sent to recipients. Yet, in another example, status information can have different levels. Some levels can be more confidential than others, or some levels can be more important than others. These levels can also be set by the user. Regardless, different recipients can receive different levels of status information.

In any case, when the decision **404** determines that status information is to be provided with the text message, the status information is acquired **406**. The status information is acquired from the mobile communication device or other computing device that is sending the text message. For example, the status information can be acquired **406** from a position detector and at least one condition sensor within (wired or wirelessly coupled to) the mobile communication device.

Regardless of how or when acquired, the status information can then be embedded **408** in the text message. Once the status information has been embedded in **408** (or otherwise combined with or linked to) the text message, the resulting message is referred to as an enhanced message. The status information can be embedded in an open (e.g., as additional displayed information) or hidden manner (e.g., as undisplayed text). In one example, the status information is embedded in the text message using a markup language. The status information being embedded in the text message can also be encrypted, or the entire enhanced message can be encrypted. After the status information is embedded **408** (as well as directly after the decision **404** when no status information is to be added, the resulting message (regardless of whether enhanced or not) is sent **410** to a recipient. The recipient is typically a user of another mobile communication device or other computing device. However, the recipient can also be the another mobile communication device or other computing device. Following the operation **410**, the send processing **400** is complete and ends.

FIG. **5** is a flow diagram of display processing **500** according to one embodiment of the invention. The display processing **500** is, for example, performed by a mobile communication device or other computing device. The display processing **500** is, for example, performed in response to a message being received due to the send processing **400** of FIG. **4**. In other words, the display processing **500** can be performed by a computing device associated with a recipient that has received a message.

The display processing **500** begins with a decision **502** that determines whether a message has been received. When the decision **502** determines that a message has not yet been received, then the display processing **500** awaits the receipt of a message. On the other hand, when the decision **502** determines that a message has been received, a decision **504** then determines whether any status information is provided with the message that has been received. Here, the message is examined to determine whether status information is provided within the message. When the decision **504** determines that status information is provided with the message (and thus the message is an enhanced message), then the status information is extracted **506** from the message.

Next, the message as well as at least one representation of the status information are displayed **508**. The representation (e.g., indication) of the status information being displayed can vary with implementation. In one embodiment, the representation is a graphical symbol that represents at least a portion of the status information. For example, a smiling face icon can represent a happy mood, a frown face icon can represent that the user is unhappy, etc. In another embodiment, the representation is textual information that is or represents a portion of the status information. In still another embodiment, the representation is a link (e.g., hyperlink) that provides access to at least a portion of the status information. For such representations, the status information can specify its presentation, or additional processing of the status information can determine an appropriate presentation.

The status information can also be interpreted, analyzed or processed before or while the representation to be displayed is determined. In one embodiment, such interpretation, analysis or processing can be performed, at least in part, by the device sending the message. As one example, the status information can include (or interpreted to include) temperature (e.g., ambient temperature) and user perspiration. Based on these two pieces of status information, one interpretation is that the user is perspiring (i.e., sweating) because of the high temperature.

As another example of the interpretation of status information, relative position of two computing devices can be computed and displayed. For example, if a receiving-computing device (either mobile or stationary) receives position information from a sending-computing device (preferably mobile), then the receiving-computing device (which knows its position) can determine and display the relative position (e.g., distance and/or direction) of the sending and the receiving-computing devices. Further, through use of other conditions information pertaining to the sending-computing device that might also be provided to the receiving-computing device, the receiving-computing device can also display the speed (velocity), direction of travel, etc. of the sending-computing device. Through additional interpretation or analysis of the conditions information, the speed (or average speed) could be used to categorize the type of movement of

the sending-computing device, which would be available for display, as a symbol or other indication. As examples, the categories could be auto, bicycle, run, fast walk, slow walk, and stationary.

In yet another example, conditions information can include the user's mood. This can be measured in a number of different ways. One method is discussed in U.S. Pat. No. 5,774,591, entitled, "APPARATUS AND METHOD FOR RECOGNIZING FACIAL EXPRESSIONS AND FACIAL GESTURES IN A SEQUENCE OF IMAGES," which is hereby incorporated herein by reference. Such conditions information can be interpreted at the sending-computing device or the receiving-computing device. Conditions information can be a user's stress level. This piece of status information can, for example, be interpreted and transformed into a symbol, such as a stressed-face icon which the stress level is high. In one embodiment, both the raw data and the symbol(s) are transmitted to a receiving-computing device, but with only the symbol being displayed and the raw data being hidden. By selecting the displayed symbol or through other appropriate user-input, the receiving-computing device can additionally analyze or view the raw data.

Alternatively, when the decision **504** determines that status information is not provided with the message, then the message is displayed **510**. Here, there is no status information available to present; therefore, the message is simply displayed. Following the operations **508** and **510**, the display processing **500** is complete and ends.

The display processing **500** operates to present at least an indicator or representation of the status information through a display. In another embodiment, the status can be presented to the user of the mobile communication device or other computing device in other ways. For example, the status information could be presented by an audio output (e.g., synthesized voice), a tactile output or other types of outputs that can be sensed by the user, which is typically a living being, such as a human being.

In one aspect of the invention, status information can be automatically included with user-entered messages being sent as noted above. As another aspect of the invention, status information can be acquired and presented on request.

FIG. **6** is a flow diagram of status retrieval processing **600** according to one embodiment of the invention. The status retrieval processing **600** is, for example, performed by a mobile communication device or other computing device.

The status retrieval processing **600** begins with a decision **602** that determines whether a status request has been requested. The status request is provided by a requestor to acquire status information from another mobile communication device or other computing device. In one embodiment, the status request is initiated by a requestor. The requestor can be a user of the mobile communication device or other computing device. In another embodiment, the status request can be initiated by the mobile communication device or other computing device. When the decision **602** determines that a status request has not been requested, then the status retrieval processing **600** awaits such a request.

Once the decision **602** determines that a status request has been requested, a status request message is produced **604**. The status request message is then sent **606** from the requestor to a recipient. In one embodiment, the status request message is a short text message (e.g., SMS message) that need not be displayed at the recipient. A status request message that is not displayed at the recipient can be referred to as a dummy message. The recipient can be another mobile communication device or other computing device, or a user thereof.

Next, a decision **608** determines whether a status response message has been received by the requestor. The status response message includes status information associated with the recipient. The status response message is a message sent by the recipient in response to the status request message from the requestor. When the decision **608** determines that the status response message has not yet been received, then the status retrieval processing **600** awaits receipt of a status response message. On the other hand, when the decision **608** determines that a status response message (responsive to the status request message) has been received, then the status retrieval processing **600** continues. Namely, status information is extracted **610** from the status response message. Next, at least one representation of the status information is displayed **612**. The representation can vary with implementation. In one embodiment, the representation is a graphical symbol that represents at least a portion of the status information. In another embodiment, the representation is text that is or represents a portion of the status information. In another embodiment, the representation is a piece of video clip that is or represents a portion of the status information. In still another embodiment, the representation is a link (e.g., hyperlink) that provides access to at least a portion of the status information. The status information can also be interpreted, analyzed or processed before or while the representation to be displayed is determined. Following the operation **600**, the status retrieval processing **600** is complete and ends.

FIG. **7** is a flow diagram of status request processing **700** according to one embodiment of the invention. The status request processing **700** is, for example, performed by a mobile communication device or other computing device. The status request processing **700** is, for example, performed in response to a status request message of the status retrieval processing **600** of FIG. **6**.

The status request processing **700** begins with a decision **702** that determines whether a status request message has been received. When the decision **702** determines that a status request message has not yet been received, then the status request processing **700** awaits such a message. Once the decision **702** determines that a status request message has been received, status information for the associated mobile communication device or other computing device or user thereof is acquired **704**. A status response message is then produced **706** based on the status information. The status response message is then sent **708** to the requestor. The requestor can be considered to be a mobile communication device or other computing device, or a user thereof, that caused the status request message to be sent. According to one embodiment, once the status response message is sent **708**, the operations **610-612** of the status retrieval processing **600** of FIG. **6** can be performed.

As described above, status information is typically presented in some manner at the recipient (often presented concurrently with a message). In other embodiments, the status information can be stored in a database for later utilization. The messages can be subsequently searched, sorted or otherwise processed.

In still another aspect of the invention, status information can be automatically sent to one or more recipients whenever available or when changed. For example, one such embodiment could have a mobile communication device periodically or on events (e.g., status events) send its status information to another computing device. As another example, status information could be automatically sent to another computing device when changed by more that a threshold amount. This would enable the another computing

device to maintain awareness of up-to-date status information of the mobile communication device. Like other embodiments, this embodiment can operate in a peer-to-peer manner or in a centralized manner.

Note that status sensors do not have to be embedded in a mobile communication device. A status sensor can be physically detached, but electronically coupled to a communication device through a wireless link, such as based on the Bluetooth or Wi-Fi technologies. In yet another embodiment, a status sensor electronically couples to a communication device through a wire connection.

In yet another embodiment, the sending of status information can be through user-activation. In other words, although a piece of status information is acquired via a status sensor, its transmission to another electronic device can depend on a user's voluntary action, such as pushing a button.

One application of the invention is to provide the status information with messages, such as text messages and in particular near real-time text messages, such as instant messages. Hence, users of computing devices, namely, mobile communication devices, can exchange near real-time text messages and in doing so can also exchange status information. In some embodiments, the exchange of status information is achieved automatically, without user initiation.

The messages can be provided in a markup language format. The status information can be embedded or included in the messages also in a markup language. As examples, the markup language include HTML, HDML, WML, XML, etc. The messages and/or status information can also be provided in a programming language format, such as JAVA or C.

Another application of the invention is in the medical area. For example, a patient carries a mobile communication device with a position detector. He is also carrying one or more status sensors that can sense, for example, his body temperature, blood pressure, blood sugar or glucose level, blood oxygen, spirometry, ECG, heart rate, arrhythmias, brain wave, other sound wave measurable by a stethoscope, and/or body fat. The sensors can be non-invasive or invasive. Also, the sensor(s) can be coupled to the device is a wireless or wired manner. Such status information can be transmitted upon his command. In one embodiment, a patient's mobile communication device sends a message ("Very tired.") to an emergency clinic. It is an enhanced message that includes some of the patient's status information, such as his physical location and blood sugar level. In response, a specialist at the clinic sends one or more messages back, instructing the patient how to care for himself and/or controlling the release of insulin into the patient. In the mean time, the specialist can dispatch an ambulance to pick him up.

A number of embodiments have been described based on text messages. The present invention is also applicable to other types of messages, such as voice messages. In one embodiment, the message is provided with a voice call, and the mobile communication device is a mobile telephone (e.g., cell phone).

Also, a number of embodiments have been described regarding a device sending information to another device. In one embodiment, a device can broadcast enhanced messages to many devices.

In yet another embodiment, communication among devices can be monitored and charged by a third party. For example, the user of a communicating device can be billed depending on the amount of enhanced messages he has been sending or the amount or degree of enhancement to messages. In one embodiment, both the recipient and the sender of the enhanced messages are billed. In another embodiment, the more types of status messages included, the higher the bill. For example, enhanced messages with position, temperature and humidity information will cost more than enhanced messages with just position.

The various aspects can be used separately or in any combination.

The above-described system, methods and processes can be used together with other aspects of a monitoring system or mobile device, including the various aspects described in: (i) U.S. Provisional Patent Application No. 60/444,198, filed Jan. 30, 2003, and entitled "SYSTEM, METHOD AND APPARATUS FOR ACQUIRING, PRESENTING, MONITORING, DELIVERING, MANAGING AND USING STATUS INFORMATION," which is hereby incorporated herein by reference; (ii) U.S. Provisional Patent Application No. 60/418,491, filed Oct. 15, 2002, and entitled "SYSTEM, METHOD AND APPARATUS FOR ACQUIRING, PRESENTING, MONITORING, DELIVERING, MANAGING AND USING STATUS INFORMATION SYSTEM, METHOD AND APPARATUS FOR ACQUIRING, PRESENTING, MANAGING AND USING POSITION INFORMATION," which is hereby incorporated herein by reference; (iii) U.S. Provisional Patent Application No. 60/404,645, filed Aug. 19, 2002, and entitled "SYSTEM, METHOD AND APPARATUS FOR ACQUIRING, PRESENTING, MONITORING, DELIVERING, MANAGING AND USING POSITION AND OTHER INFORMATION," which is hereby incorporated herein by reference; and (iv) U.S. Provisional Patent Application No. 60/375,998, filed Apr. 24, 2002, and entitled "SYSTEM, METHOD AND APPARATUS FOR ACQUIRING, PRESENTING, MANAGING AND USING POSITION INFORMATION," which is hereby incorporated herein by reference.

The invention can be implemented in software, hardware or a combination of hardware and software. The invention can also be embodied as computer readable code on a computer readable medium. The computer readable medium can be any data storage device that can store data which can thereafter be read by a computing device. Examples of the computer readable medium include read-only memory, random-access memory, CD-ROMs, magnetic tape, optical data storage devices, and carrier waves. The computer readable medium can also be distributed over network-coupled computer systems so that the computer readable code is stored and executed in a distributed fashion.

The advantages of the invention are numerous. Different embodiments or implementations may yield one or more of the following advantages. One advantage is that status information is able to be obtained easily while exchanging electronic messages or otherwise through use of electronic messages. Another advantage of the invention is that messages are able to be enhanced with status information acquired by sensors. Still another advantage of the invention is that it can operate in a point-to-point or centralized manner to gather and present status information between computing devices (e.g., mobile communication devices).

The many features and advantages of the present invention are apparent from the written description and, thus, it is intended by the appended claims to cover all such features and advantages of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation as illustrated and described. Hence, all suitable modifications and equivalents may be resorted to as falling within the scope of the invention.

What is claimed is:

1. A non-transitory computer readable medium including at least computer program code tangibly stored thereon for facilitating communication among users of mobile electronic devices, said computer readable medium comprising:

computer program code for receiving message content for an electronic message via a first mobile electronic device;

computer program code for acquiring an environmental condition associated an environment of the first mobile electronic device;

computer program code for determining a plurality of other mobile electronic devices or users thereof that are to receive the electronic message along with data pertaining to the environmental condition;

computer program code for determining whether at least one indication has been received from the first mobile electronic device to influence whether the data pertaining to the environmental condition is to be provided with the electronic message, the at least one indication received being user-initiated via the first mobile electronic device and being for the electronic message;

computer program code for determining, based at least in part on the at least one indication, whether the data pertaining to the environmental condition is to be provided with the electronic message; and

computer program code for initiating sending of the electronic message along with the data pertaining to the environmental condition to each of the plurality of other mobile electronic devices via at least one wireless network, provided that the computer program code for determining whether the data pertaining to the environmental condition is to be provided with the electronic message determines that the data pertaining to the environmental condition is to be provided with the electronic message,

wherein each of the plurality of other mobile electronic devices are able to provide a presentation of at least a portion of the data pertaining to the environmental condition, and wherein the presentation of the at least a portion of the data pertaining to the environmental condition includes at least an audio presentation associated with the at least a portion of the data pertaining to the environmental condition.

2. A non-transitory computer readable medium including at least computer program code tangibly stored thereon for facilitating communication among users of mobile electronic devices, said computer readable medium comprising:

computer program code for receiving message content for an electronic message via a first mobile electronic device;

computer program code for identifying a location of the first mobile electronic device;

computer program code for acquiring an environmental condition associated with the location of the first mobile electronic device;

computer program code for determining a plurality of other mobile electronic devices or users thereof that are to receive the electronic message along with data pertaining to the environmental condition;

computer program code for determining whether the data pertaining to the environmental condition is to be provided with the electronic message, and

computer program code for initiating sending of the electronic message along with the data pertaining to the environmental condition to each of the plurality of other mobile electronic devices via at least one wireless network, provided that the computer program code for determining whether the data pertaining to the environmental condition is to be provided with the electronic message determines that the data pertaining to the environmental condition is to be provided with the electronic message.

3. A non-transitory computer readable medium as recited in claim 2,

wherein the computer program code for determining whether the data pertaining to the environmental condition is to be provided with the electronic message comprises:

computer program code for determining whether at least one indication has been received from the first mobile electronic device to influence whether the data pertaining to the environmental condition is to be provided with the electronic message, the at least one indication received being user-initiated via the first mobile electronic device and being for the electronic message, and

wherein the computer program code for determining whether the data pertaining to the environmental condition is to be provided with the electronic message determines whether the data pertaining to the environmental condition is to be provided with the electronic message based at least in part on the at least one indication.

4. A non-transitory computer readable medium as recited in claim 2, wherein said computer readable medium comprises:

computer program code for receiving another electronic message from another mobile electronic device via the at least one wireless network;

computer program code for determining whether the another electronic message has at least received status information associated therewith;

computer program code for acquiring the received status information that has been provided with the another message from the another mobile electronic device when the computer program code for determining determines that the another message includes at least the received status information, the received status information includes at least received environmental information associated with the another mobile electronic device; and

computer program code for facilitating presentation of at least a portion of the another message and at least one presentation of at least a portion of the received environmental information when the computer program code for determining determines that the received message includes at least the received status information.

5. A non-transitory computer readable medium as recited in claim 4, wherein the presentation of the at least a portion of the received environmental information provides an audio output that provides an audio presentation of at least a portion of the received environmental information associated with the another mobile electronic device.

6. A non-transitory computer readable medium as recited in claim 5, wherein the presentation of the at least a portion of the received environmental information comprises display of a visual representation of at least a portion of the received environmental information associated with the another mobile electronic device.

7. A non-transitory computer readable medium as recited in claim 6, wherein the message content comprises graphical content and text content.

8. A non-transitory computer readable medium as recited in claim 4, wherein the presentation of the at least a portion of the received environmental information comprises display of a visual representation of at least a portion of the received environmental information associated with the another mobile electronic device.

9. A non-transitory computer readable medium as recited in claim 2, wherein the message content comprises graphical content or image data.

10. A non-transitory computer readable medium as recited in claim 1,

wherein the computer program code for determining whether the data pertaining to the environmental condition is to be provided with the electronic message comprises:

computer program code for determining whether at least one indication has been received from the first mobile electronic device to influence whether the data pertaining to the environmental condition is to be provided with the electronic message, the at least one indication received being user-initiated via the first mobile electronic device and being for the electronic message, and

wherein the computer program code for determining whether the data pertaining to the environmental condition is to be provided with the electronic message determines whether the data pertaining to the environmental condition is to be provided with the electronic message based at least in part on the at least one indication.

11. A non-transitory computer readable medium as recited in claim 1, wherein said computer readable medium comprises:

computer program code for receiving another electronic message from another mobile electronic device via the at least one wireless network;

computer program code for determining whether the another electronic message has at least received status information associated therewith;

computer program code for acquiring the received status information that has been provided with the another message from the another mobile electronic device when the computer program code for determining determines that the another message includes at least the received status information, the received status information includes at least received environmental information associated with the another mobile electronic device; and

computer program code for facilitating presentation of at least a portion of the another message and at least one presentation of at least a portion of the received environmental information when the computer program code for determining determines that the received message includes at least the received status information.

12. A non-transitory computer readable medium as recited in claim 11, wherein the presentation of the at least a portion of the received environmental information provides an audio output that provides an audio presentation of at least a portion of the received environmental information associated with the another mobile electronic device.

13. A non-transitory computer readable medium as recited in claim 12, wherein the presentation of the at least a portion of the received environmental information comprises display of a visual representation of at least a portion of the received environmental information associated with the another mobile electronic device.

14. A non-transitory computer readable medium as recited in claim 13, wherein the message content comprises graphical content.

15. A non-transitory computer readable medium as recited in claim 11, wherein the presentation of the at least a portion of the received environmental information comprises display of a visual representation of at least a portion of the received environmental information associated with the another mobile electronic device.

16. A non-transitory computer readable medium as recited in claim 1, wherein the message content comprises graphical content or image data.

17. A non-transitory computer readable medium including at least computer program code tangibly stored thereon for facilitating communication among users of mobile electronic devices, said computer readable medium comprising:

computer program code for receiving message content for an electronic message via a first mobile electronic device;

computer program code for acquiring an environmental condition associated with an environment of the first mobile electronic device;

computer program code for determining a plurality of other mobile electronic devices or users thereof that are to receive the electronic message along with the environmental condition;

computer program code for determining whether at least one indication has been received from the first mobile electronic device to influence whether the environmental condition is to be provided with the electronic message, the at least one indication received being user-initiated via the first mobile electronic device and being for the electronic message;

computer program code for determining based at least in part on the at least one indication whether the environmental condition is to be provided with the electronic message;

computer program code for initiating sending of the electronic message along with the environmental condition to each of the plurality of other mobile electronic devices via at least one wireless network, provided that the computer program code for determining determines that the environmental condition is to be provided with the electronic message;

computer program code for receiving an electronic message from another mobile electronic device via the at least one wireless network;

computer program code for determining whether the received electronic message has at least received status information associated therewith;

computer program code for acquiring the status information that has been provided with the received message from the another mobile electronic device when the computer program code for determining determines that the received message includes at least the received status information, the received status information includes at least received environmental information associated with the another mobile electronic device; and

computer program code for facilitating presentation of at least a portion of the received message and at least one presentation of at least a portion of the received environmental information when the computer program code for determining determines that the received message includes at least the received status information, wherein the presentation of the at least a portion of the received environmental information provides an audio

output that provides an audio presentation pertaining to at least a portion of the received environmental information.

18. A non-transitory computer readable medium as recited in claim **17**, wherein the presentation of the at least a portion of the received environmental information displays a visual representation of at least a portion of the received environmental information.

19. A non-transitory computer readable medium as recited in claim **18**, wherein the message content comprises graphical content, and wherein the visual representation of at least a portion of the received environmental information being display is presented in a graphical manner.

20. A non-transitory computer readable medium including at least computer program code tangibly stored thereon for facilitating communication among users of mobile electronic devices, said computer readable medium comprising:

computer program code for receiving, at a recipient mobile electronic device, an electronic message from another mobile electronic device via the at least one wireless network;

computer program code for determining whether the received electronic message has at least received status information provided therewith, the received status information including at least environmental information;

computer program code for retrieving the received status information provided with the received message from the another mobile electronic device when the computer program code for determining determines that the received message has at least the received status information provided therewith; and

computer program code for facilitating presenting, at the recipient mobile electronic device, at least a portion of the received message and at least one representation pertaining to at least a portion of the received status information when the computer program code for determining determines that the received message has at least the received status information provided therewith,

wherein the computer program code for facilitating presentation of the at least a portion of the received message and at least one representation pertaining to at least a portion of the received status information comprises computer program code for facilitating audio output, via the recipient mobile electronic device, pertaining to at least a portion of the environmental information included within the at least a portion of the received status information.

21. A non-transitory computer readable medium as recited in claim **20**, wherein the computer program code for facilitating presentation of the at least a portion of the received message and at least one representation of at least a portion of the received status information comprises:

computer program code for facilitating visual display of the at least a portion of the received message.

22. A non-transitory computer readable medium as recited in claim **21**, wherein the at least a portion of the environmental information is associated with a location of the another mobile electronic device.

23. A non-transitory computer readable medium as recited in claim **22**, wherein the location of the another mobile electronic device pertains to location of the another mobile electronic device at the time the electronic message is sent from the another mobile electronic device.

24. A non-transitory computer readable medium as recited in claim **20**, wherein the environmental information is dependent on the location of the another mobile electronic device.

25. A non-transitory computer readable medium as recited in claim **20**, wherein the computer program code for facilitating presentation of the at least a portion of the received message and at least one representation of at least a portion of the received status information comprises:

computer program code for facilitating visual display of the at least a portion of the received status information.

26. A non-transitory computer readable medium as recited in claim **20**, wherein the computer program code for facilitating presentation of the at least a portion of the received message and at least one representation of at least a portion of the received status information comprises:

computer program code for processing the at least a portion of the environmental information to determine a graphical representation thereof; and

computer program code for facilitating display of the graphical representation of the at least a portion of the environmental information.

27. A non-transitory computer readable medium as recited in claim **20**, wherein the computer program code for facilitating presentation of the at least a portion of the received message and at least one representation of at least a portion of the received status information comprises:

computer program code for obtaining a graphical representation of the at least a portion of the environmental information; and

computer program code for facilitating display of the graphical representation of the at least a portion of the environmental information.

28. A non-transitory computer readable medium as recited in claim **20**, wherein the computer program code for facilitating presentation of the at least a portion of the received message and at least one representation of at least a portion of the received status information comprises:

computer program code for obtaining an audio representation pertaining to at least a portion of the environmental information; and

computer program code for facilitating the audio output pertaining to the at least a portion of the environmental information using the audio representation.

29. A non-transitory computer readable medium as recited in claim **20**, wherein the environmental information is associated a location of the another mobile electronic device, and wherein the at least one representation of at least a portion of the received status information being presented displays a visual representation of at least a portion of the environmental information associated with the location of the another mobile electronic device.

30. A non-transitory computer readable medium as recited in claim **20**, wherein the received status information includes at least location information associated with a location of the another mobile electronic device, and wherein the at least one representation of at least a portion of the received status information being presented displays a representation pertaining to the location information associated with the another mobile electronic device.

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