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(54) **MESSAGING ACHIEVEMENT PICTOGRAPH DISPLAY SYSTEM**

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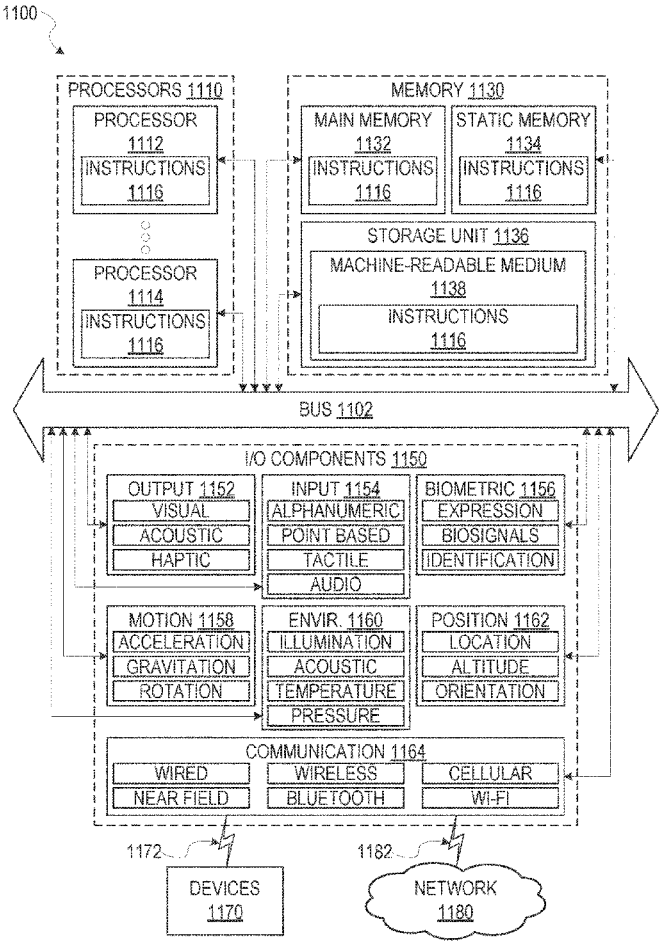
(57) **ABSTRACT**

Systems and methods for causing display of a messaging achievement pictograph based on messaging activity are provided. In some example embodiments, a message activity communication is received by a messaging activity service from a client device, the messaging active communication causing and adjustment to a message activity score and the message activity score transgressing a first threshold activity score. Responsive to the message activity transgressing the first threshold activity score, an achievement pictograph is displayed on the client device. In some example embodiments, the pictograph may be ephemeral and removal of the pictograph may be triggered by a designated time or by the message activity score transgressing a second threshold activity score. In some example embodiments, a notification is generated that notifies a user of the display or removal from display of the achievement pictograph.



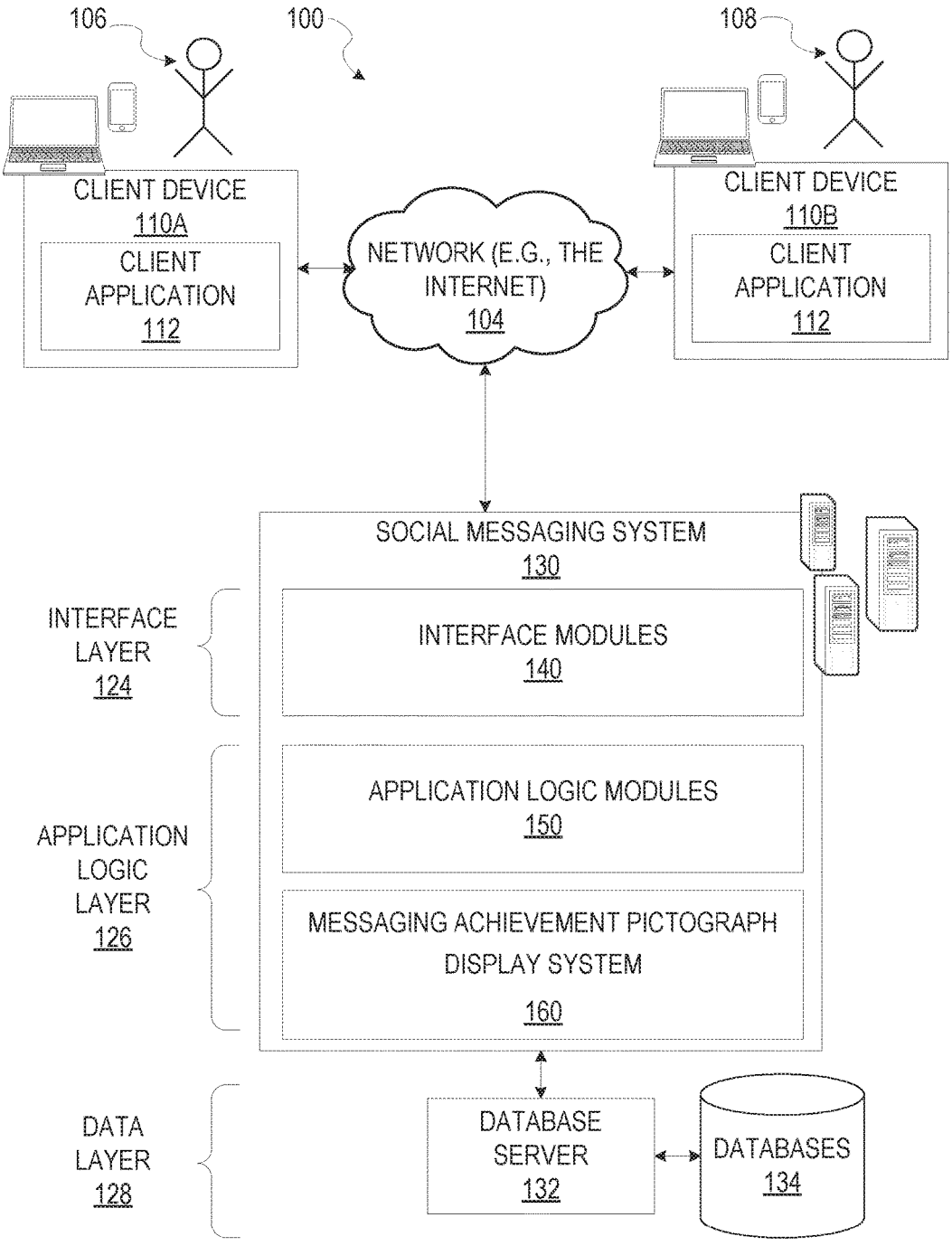

106
100
108
CLIENT DEVICE
110A
CLIENT APPLICATION
112
NETWORK (E.G., THE INTERNET)
104
CLIENT DEVICE
110B
CLIENT APPLICATION
112
SOCIAL MESSAGING SYSTEM
130
INTERFACE LAYER
124
INTERFACE MODULES
140
APPLICATION LOGIC LAYER
126
APPLICATION LOGIC MODULES
150
MESSAGING ACHIEVEMENT PICTOGRAPH DISPLAY SYSTEM
160
DATA LAYER
128
DATABASE SERVER
132
DATABASES
134

FIG. 1

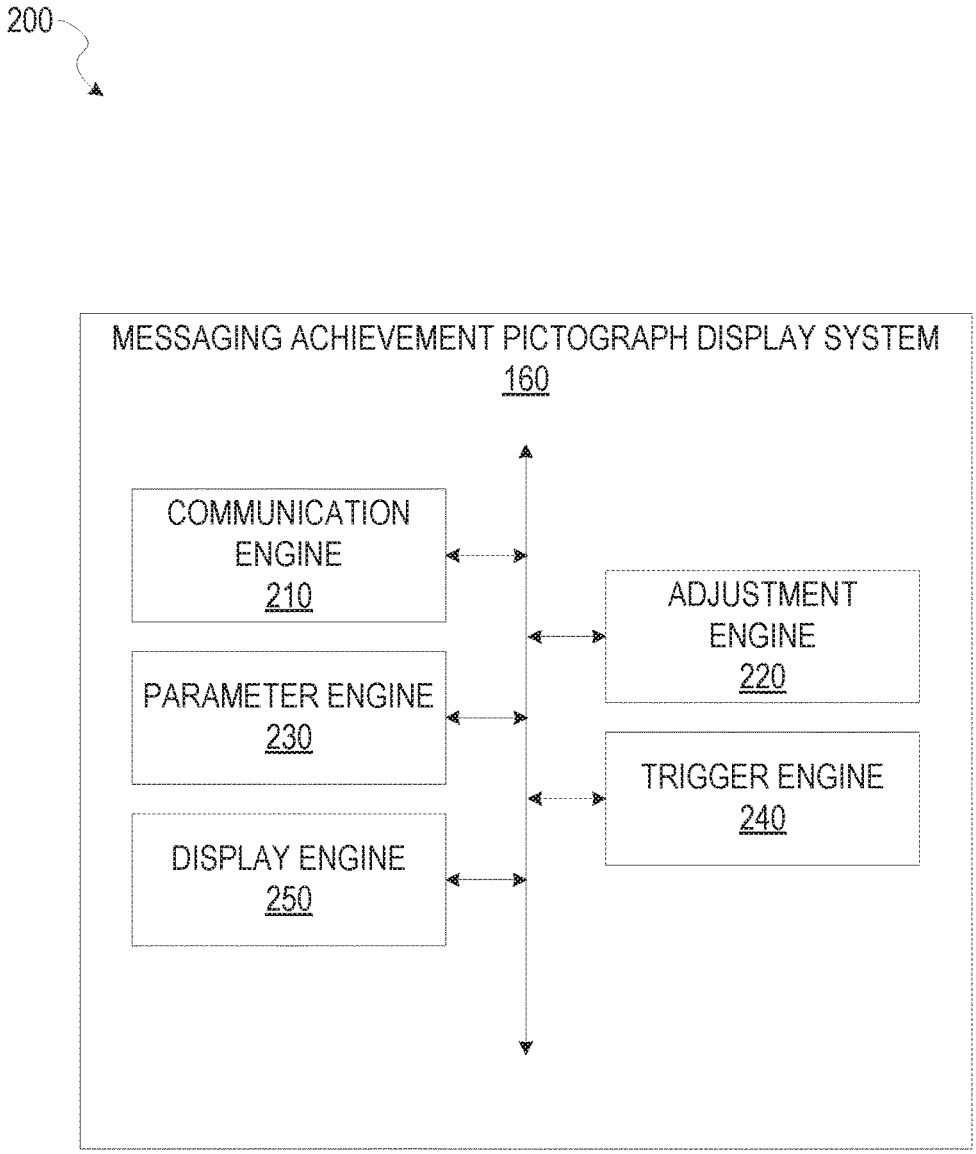

200
MESSAGING ACHIEVEMENT PICTOGRAPH DISPLAY SYSTEM
160
COMMUNICATION ENGINE
210
ADJUSTMENT ENGINE
220
PARAMETER ENGINE
230
TRIGGER ENGINE
240
DISPLAY ENGINE
250

FIG. 2

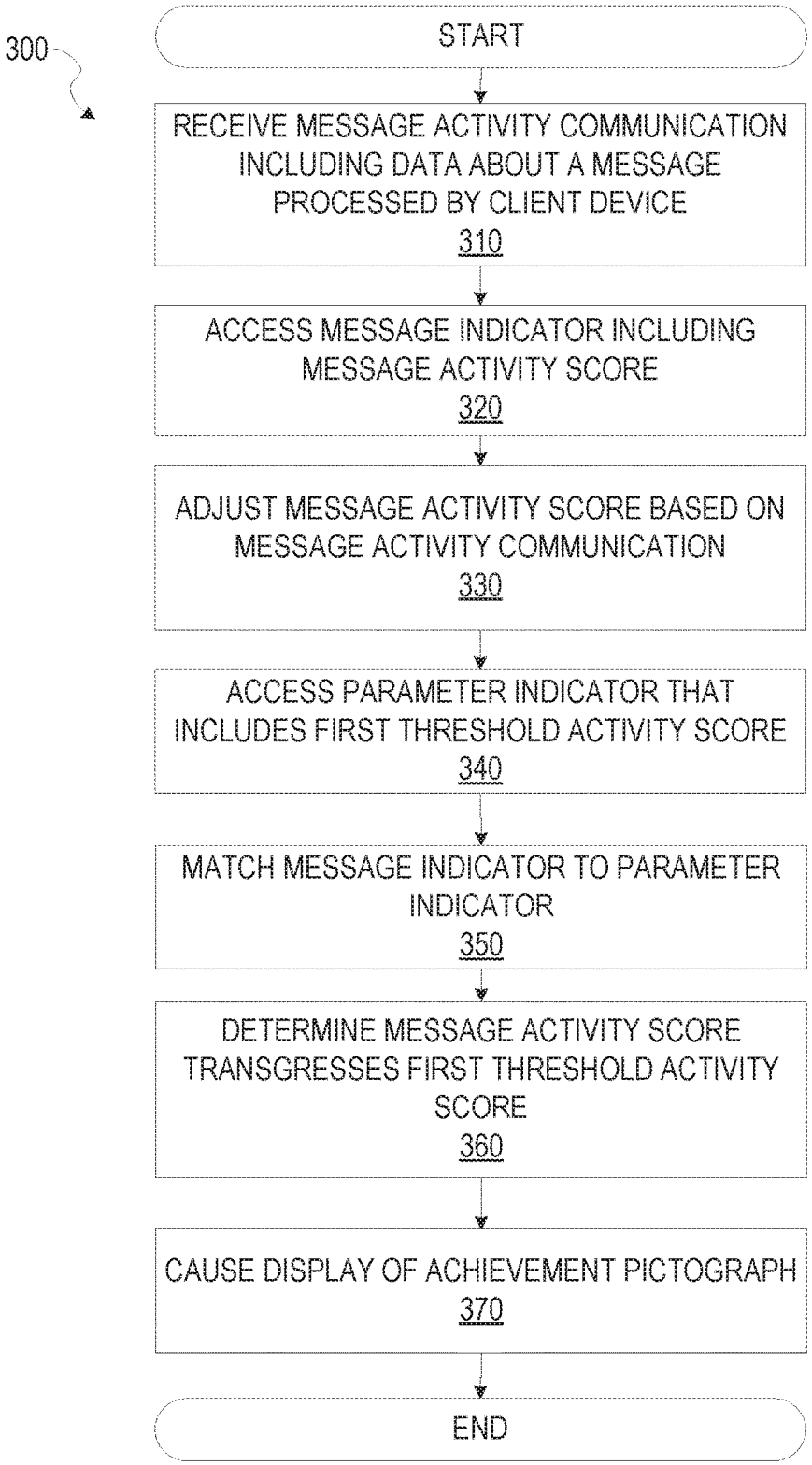

300
START
RECEIVE MESSAGE ACTIVITY COMMUNICATION INCLUDING DATA ABOUT A MESSAGE PROCESSED BY CLIENT DEVICE
310
ACCESS MESSAGE INDICATOR INCLUDING MESSAGE ACTIVITY SCORE
320
ADJUST MESSAGE ACTIVITY SCORE BASED ON MESSAGE ACTIVITY COMMUNICATION
330
ACCESS PARAMETER INDICATOR THAT INCLUDES FIRST THRESHOLD ACTIVITY SCORE
340
MATCH MESSAGE INDICATOR TO PARAMETER INDICATOR
350
DETERMINE MESSAGE ACTIVITY SCORE TRANSGRESSES FIRST THRESHOLD ACTIVITY SCORE
360
CAUSE DISPLAY OF ACHIEVEMENT PICTOGRAPH
370
END

FIG. 3

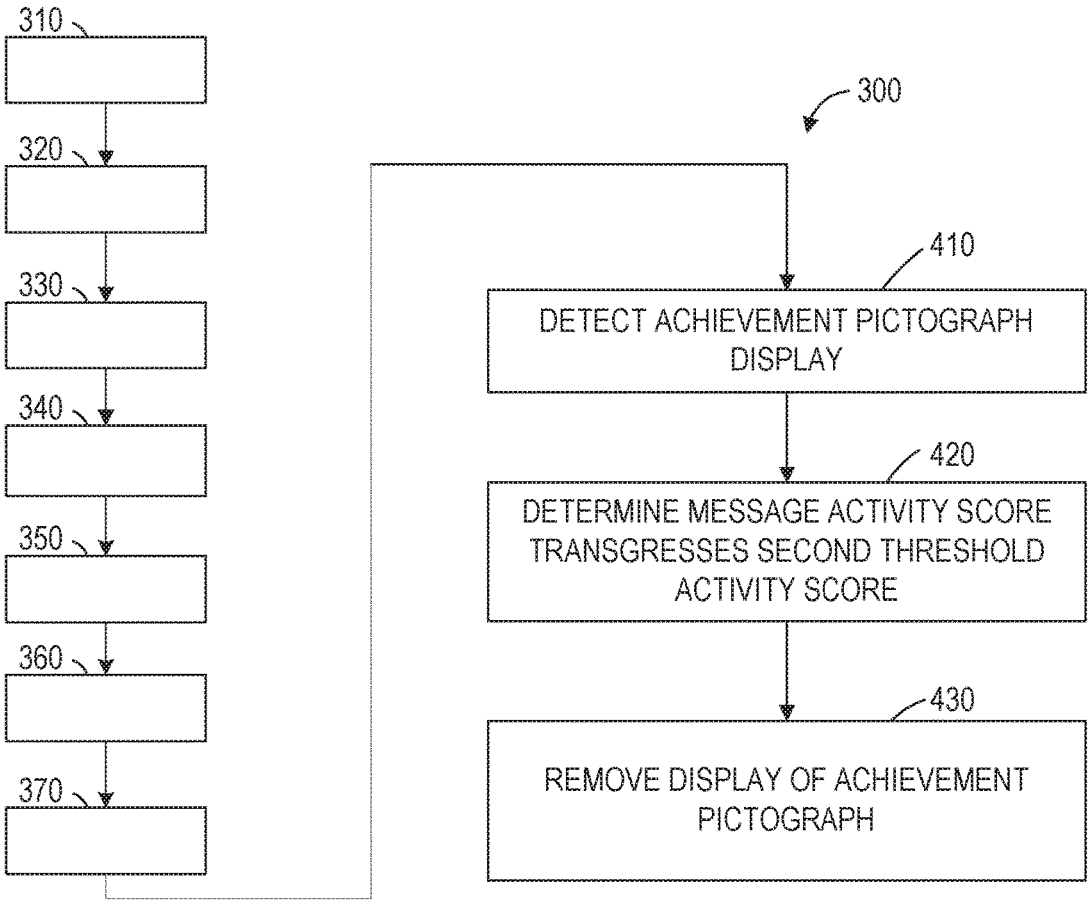

310
320
330
340
350
360
370
300
410
DETECT ACHIEVEMENT PICTOGRAPH DISPLAY
420
DETERMINE MESSAGE ACTIVITY SCORE TRANSGRESSES SECOND THRESHOLD ACTIVITY SCORE
430
REMOVE DISPLAY OF ACHIEVEMENT PICTOGRAPH

FIG. 4

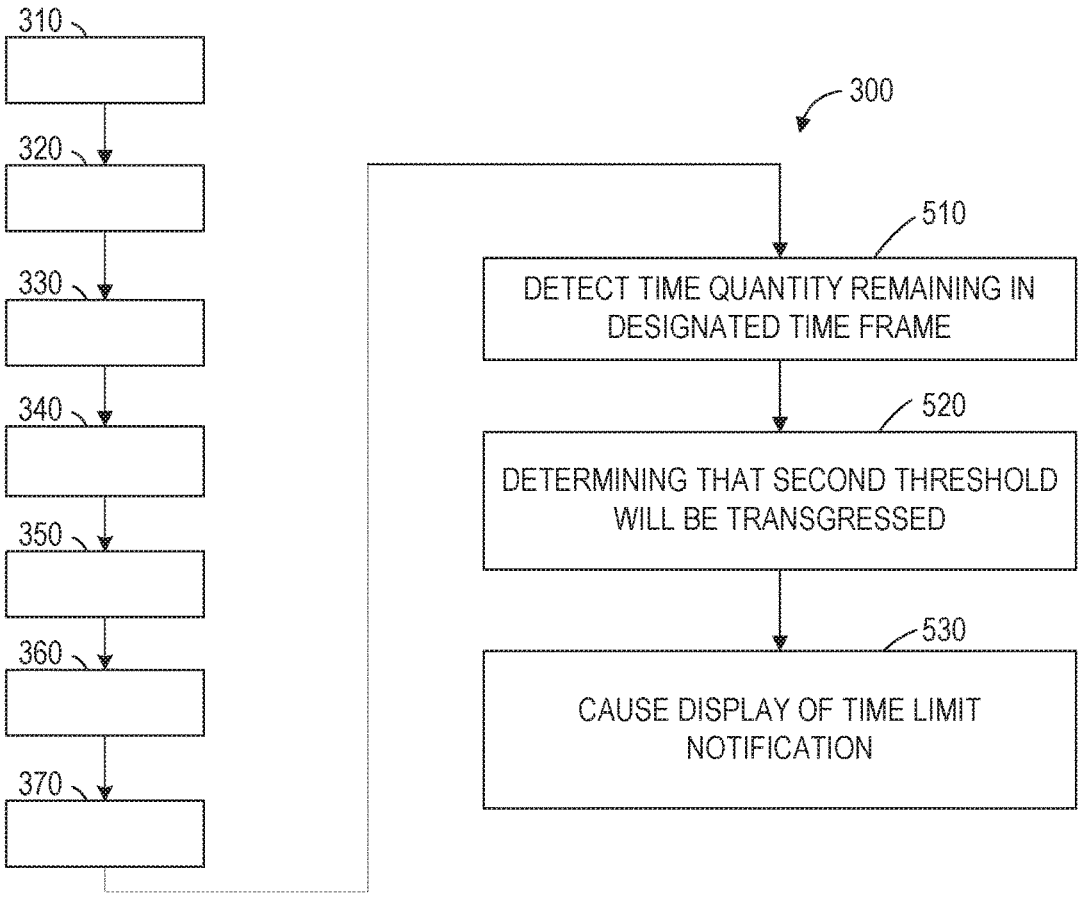

310
320
330
340
350
360
370
300
510
DETECT TIME QUANTITY REMAINING IN DESIGNATED TIME FRAME
520
DETERMINING THAT SECOND THRESHOLD WILL BE TRANSGRESSED
530
CAUSE DISPLAY OF TIME LIMIT NOTIFICATION

FIG. 5

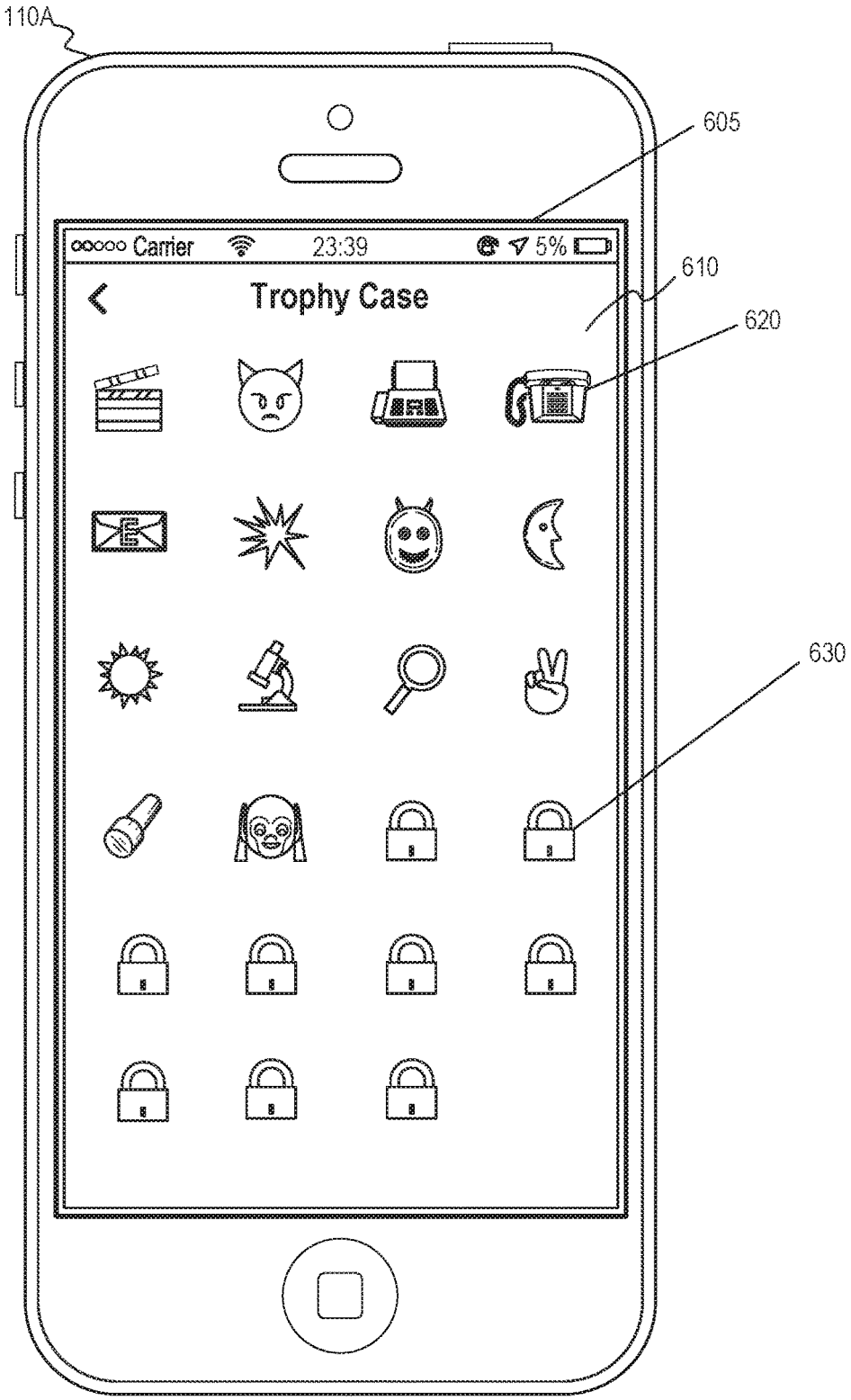


FIG. 6

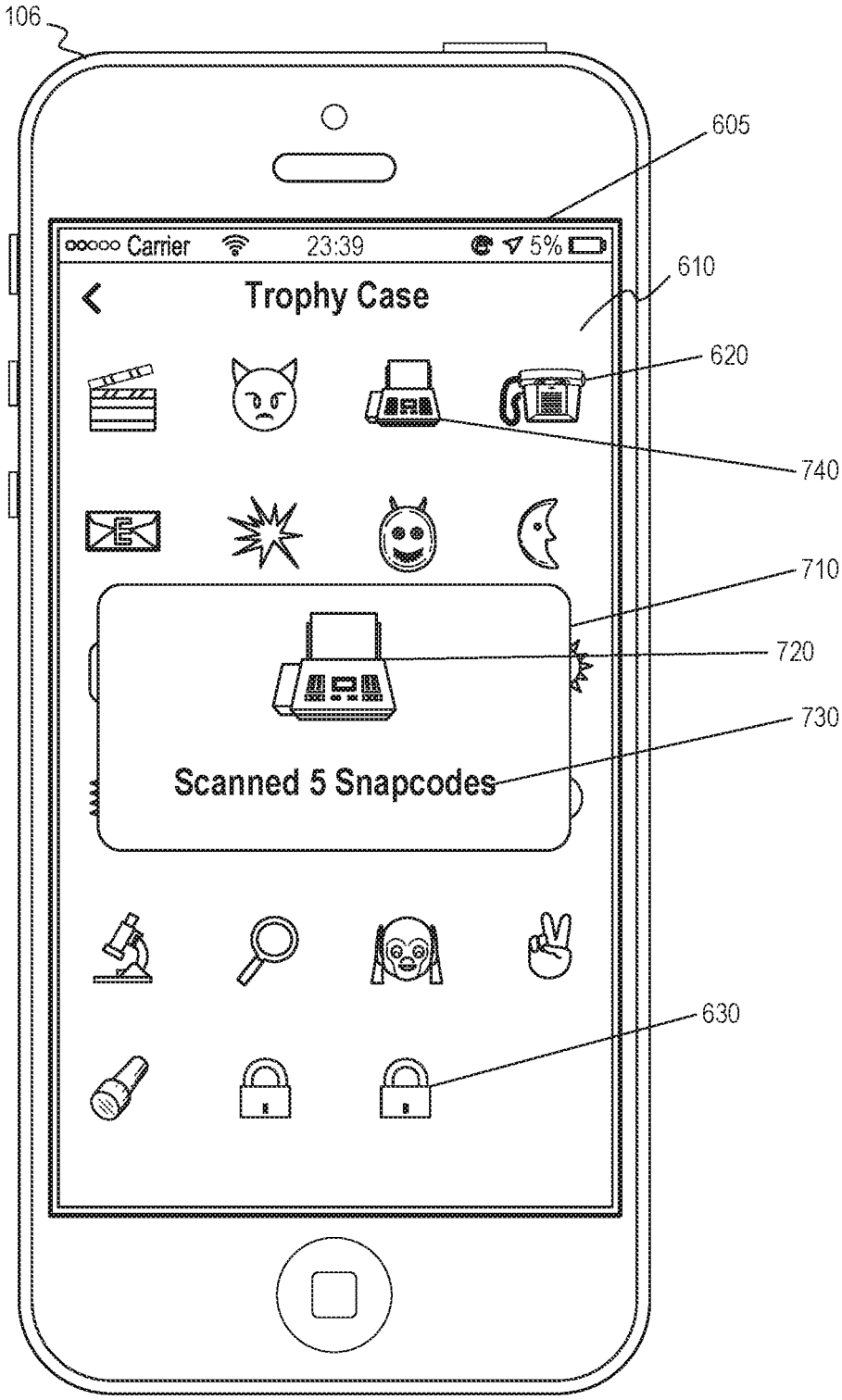

106
605
Carrier
23:39
5%
610
Trophy Case
620
740
710
720
730
Scanned 5 Snapcodes
630

FIG. 7

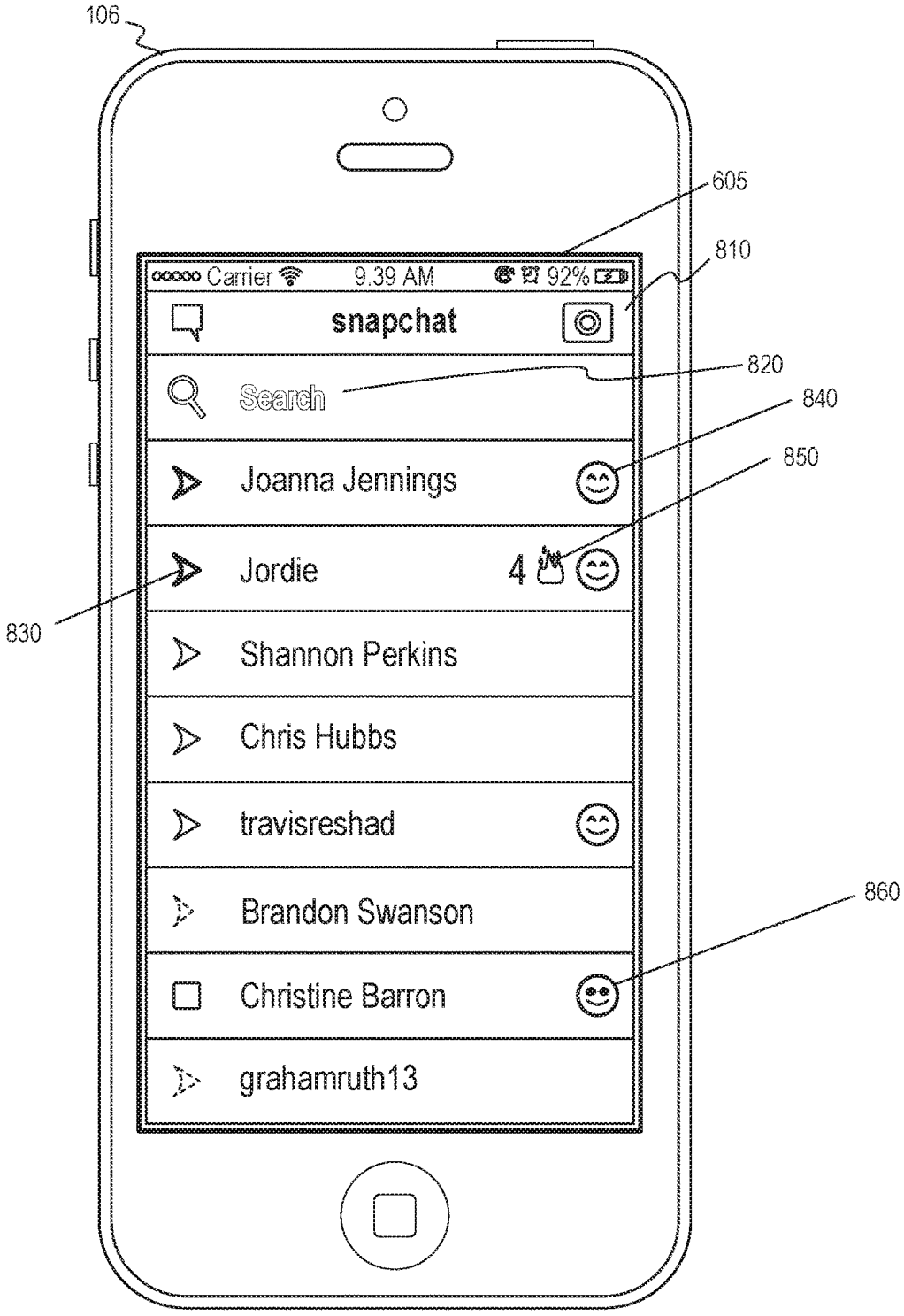

106
605
810
820
840
850
830
860
Carrier
9.39 AM
92%
snapchat
Search
Joanna Jennings
Jordie
4
Shannon Perkins
Chris Hubbs
travisreshad
Brandon Swanson
Christine Barron
grahamruth13

FIG. 8

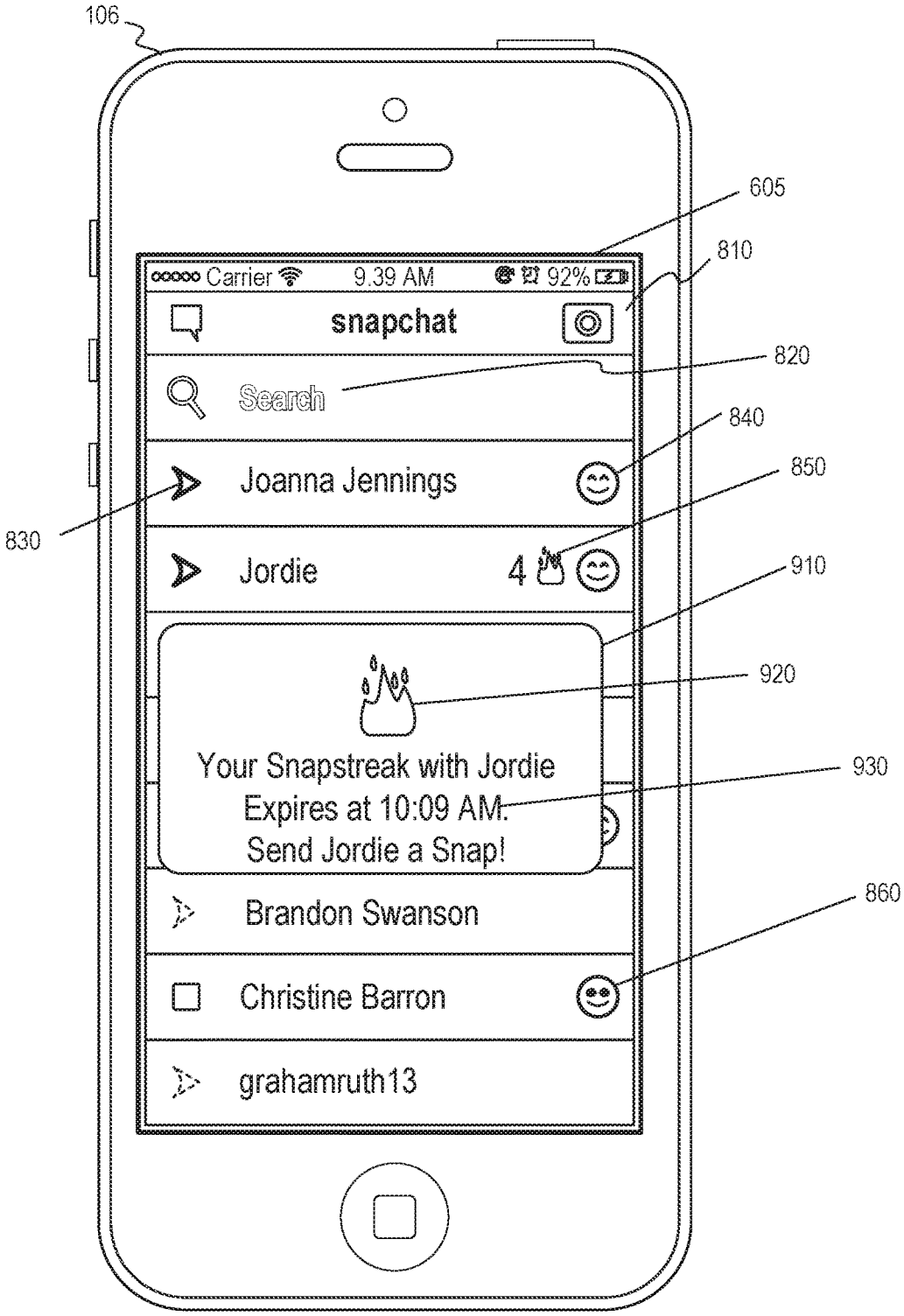

106
605
810
820
840
850
830
910
920
930
860
Carrier
9.39 AM
92%
snapchat
Search
Joanna Jennings
Jordie
4
Your Snapstreak with Jordie
Expires at 10:09 AM.
Send Jordie a Snap!
Brandon Swanson
Christine Barron
grahamruth13

FIG. 9

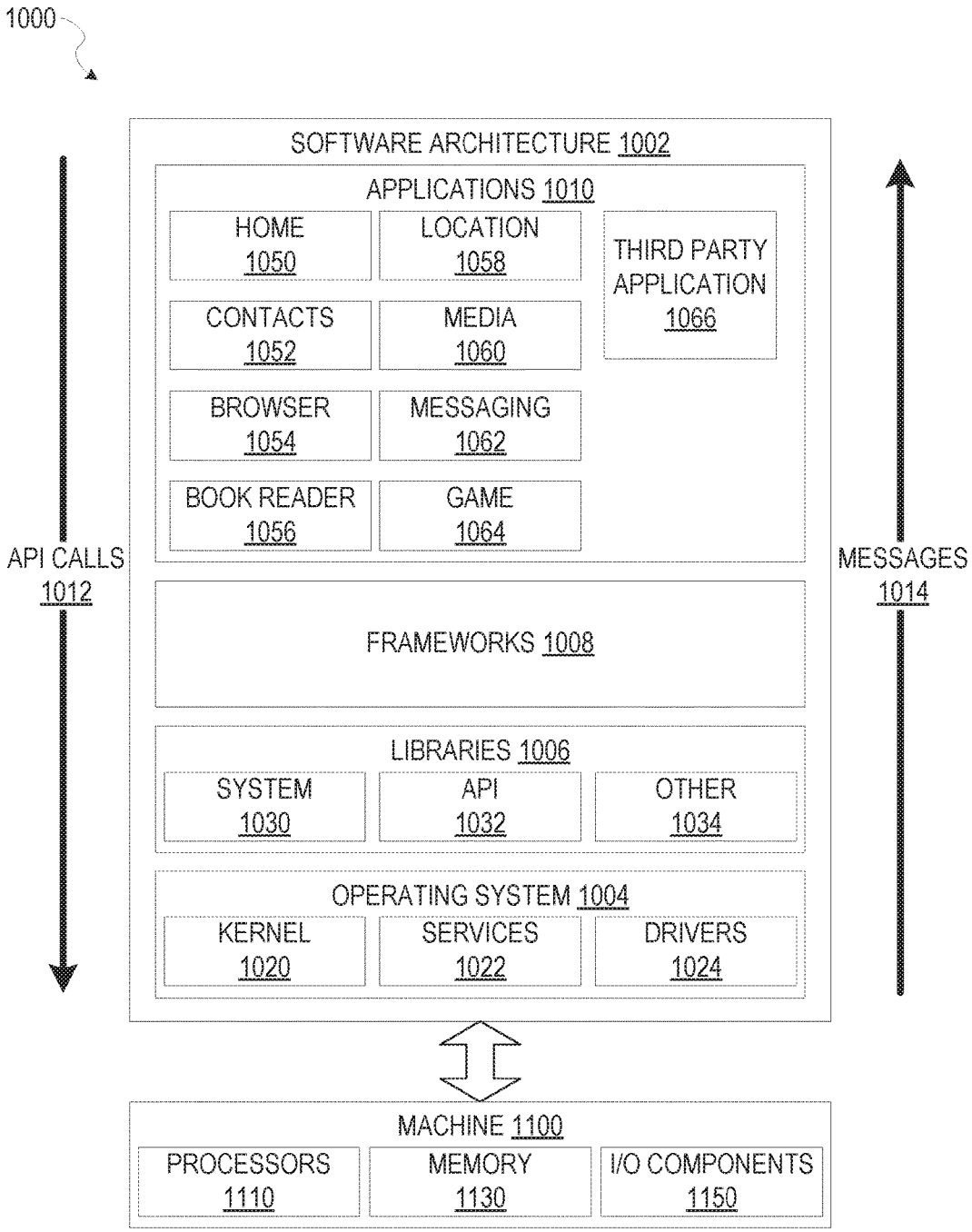

1000
SOFTWARE ARCHITECTURE 1002
APPLICATIONS 1010
HOME 1050
LOCATION 1058
THIRD PARTY APPLICATION 1066
CONTACTS 1052
MEDIA 1060
BROWSER 1054
MESSAGING 1062
BOOK READER 1056
GAME 1064
API CALLS 1012
MESSAGES 1014
FRAMEWORKS 1008
LIBRARIES 1006
SYSTEM 1030
API 1032
OTHER 1034
OPERATING SYSTEM 1004
KERNEL 1020
SERVICES 1022
DRIVERS 1024
MACHINE 1100
PROCESSORS 1110
MEMORY 1130
I/O COMPONENTS 1150

FIG. 10

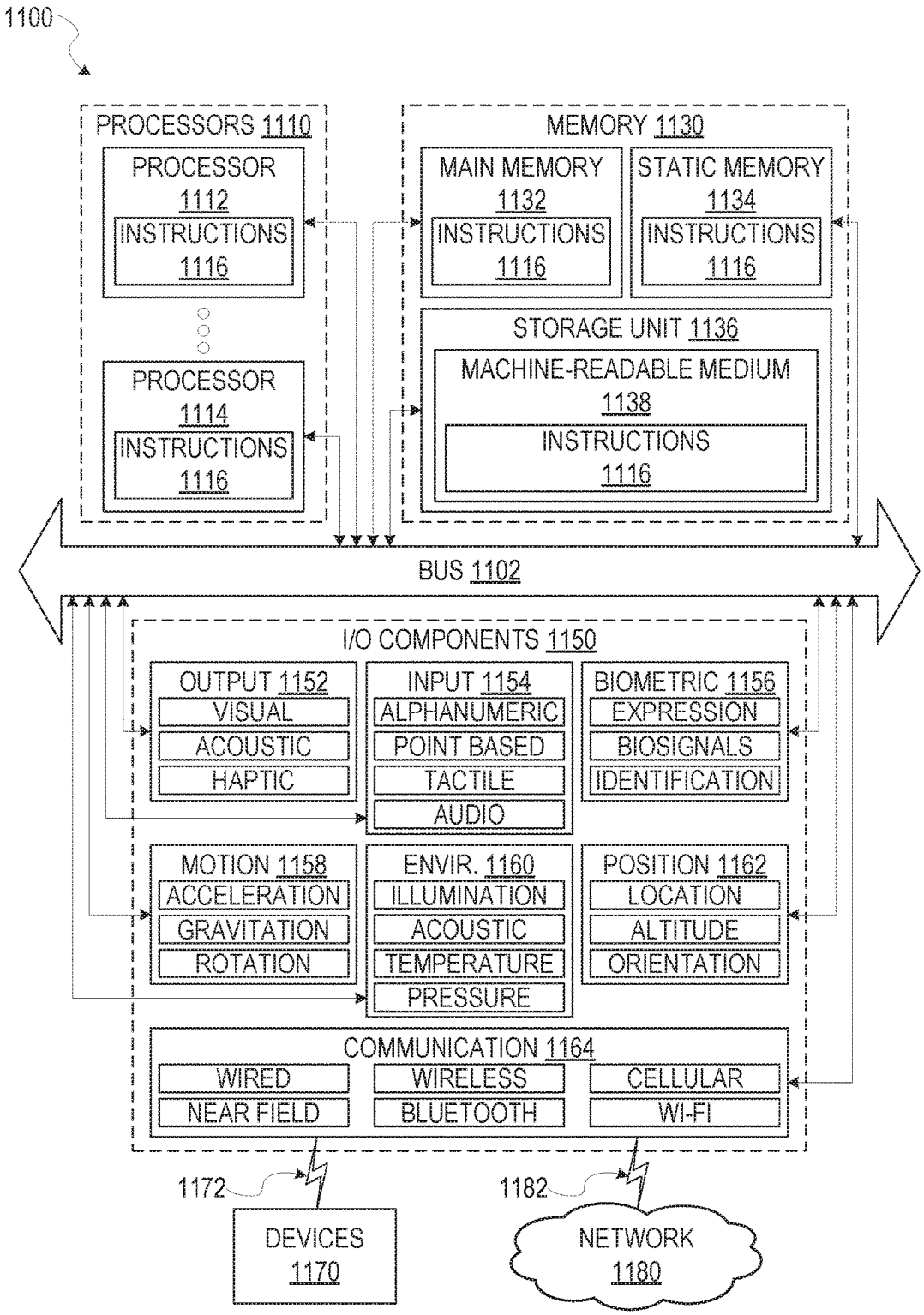

1100
PROCESSORS 1110
PROCESSOR 1112
INSTRUCTIONS 1116
PROCESSOR 1114
INSTRUCTIONS 1116
MEMORY 1130
MAIN MEMORY 1132
INSTRUCTIONS 1116
STATIC MEMORY 1134
INSTRUCTIONS 1116
STORAGE UNIT 1136
MACHINE-READABLE MEDIUM 1138
INSTRUCTIONS 1116
BUS 1102
I/O COMPONENTS 1150
OUTPUT 1152
VISUAL
ACOUSTIC
HAPTIC
INPUT 1154
ALPHANUMERIC
POINT BASED
TACTILE
AUDIO
BIOMETRIC 1156
EXPRESSION
BIOSIGNALS
IDENTIFICATION
MOTION 1158
ACCELERATION
GRAVITATION
ROTATION
ENVIR. 1160
ILLUMINATION
ACOUSTIC
TEMPERATURE
PRESSURE
POSITION 1162
LOCATION
ALTITUDE
ORIENTATION
COMMUNICATION 1164
WIRED
WIRELESS
CELLULAR
NEAR FIELD
BLUETOOTH
WI-FI
1172
DEVICES 1170
1182
NETWORK 1180

FIG. 11

MESSAGING ACHIEVEMENT PICTOGRAPH DISPLAY SYSTEM

CLAIM OF PRIORITY

[0001] This application claims the benefit of priority of U.S. Provisional Application No. 62/318,950, filed Apr. 6, 2016, which is hereby incorporated by reference in its entirety.

TECHNICAL FIELD

[0002] Embodiments of the present disclosure relate generally to mobile computing technology and, more particularly, but not by way of limitation, to a messaging achievement pictograph display system.

BACKGROUND

[0003] In recent years, mobile devices, wearable devices, smart devices, and the like have pervaded nearly every aspect of modern life. Emojis are a popular form of expression in digital communications. As a result of this popularity, there is an ever-increasing variety of emojis for a wide variety of expressions.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] Various ones of the appended drawings merely illustrate example embodiments of the present disclosure and should not be considered as limiting its scope.

[0005] FIG. **1** is a block diagram illustrating a networked system, according to some example embodiments.

[0006] FIG. **2** is a block diagram illustrating an example embodiment of a messaging achievement pictograph display system, according to some example embodiments.

[0007] FIG. **3** is a flow diagram illustrating an example method of causing display of a messaging achievement pictograph based on messaging activity, according to some example embodiments.

[0008] FIG. **4** is a flow diagram illustrating further example operations for causing display of a messaging achievement pictograph, according to some example embodiments.

[0009] FIG. **5** is a flow diagram illustrating further example operations for causing display of a messaging achievement pictograph, according to some example embodiments.

[0010] FIGS. **6** and **7** are diagrams illustrating an example of a graphical user interface that is configured to display pictographs and a notification window to show when a new pictograph is added.

[0011] FIGS. **8** and **9** are diagrams illustrating an example of a graphical user interface that is configured to display messages and pictographs as well as a notification window to show when a currently displayed pictograph will be removed.

[0012] FIG. **10** is a block diagram illustrating an example of a software architecture that may be installed on a machine, according to some example embodiments.

[0013] FIG. **11** is a block diagram presenting a diagrammatic representation of a machine in the form of a computer system within which a set of instructions may be executed for causing the machine to perform any of the methodologies discussed herein, according to an example embodiment.

[0014] The headings provided herein are merely for convenience and do not necessarily affect the scope or meaning of the terms used.

DETAILED DESCRIPTION

[0015] The description that follows includes systems, methods, techniques, instruction sequences, and computing machine program products that embody illustrative embodiments of the disclosure. In the following description, for the purposes of explanation, numerous specific details are set forth in order to provide an understanding of various embodiments of the inventive subject matter. It will be evident, however, to those skilled in the art, that embodiments of the inventive subject matter may be practiced without these specific details. In general, well-known instruction instances, protocols, structures, and techniques are not necessarily shown in detail.

[0016] Person to person communication can frequently involve the use of text messages, picture messages and video messages. A social messaging system may facilitate these communications. Additionally, a social messaging system may directly receive messages from a user. However, the user may, knowingly or unknowingly, fall out of touch with other contacts that the user had frequent communication with. Alternatively, the user may not take advantage of various features of the messaging system because the user does not recognize the function of the features. Previously existing systems allow for various forms of messaging but fail to provide adequate encouragement for the user to communicate with contacts that have recently gone "stale" due to inactivity or where the user does not take advantage of helpful features of the social messaging system.

[0017] In various embodiments described herein, to encourage user participation in messaging, pictographs may be displayed to the user to symbolize an achievement related to messaging. Each pictograph may be one of a vast number of emojis, and the display is linked to the type of achievement fulfilled by the user. In order to assess whether the achievement is fulfilled, the social messaging system may receive a message activity communication from a client device, access messaging activity from various databases, determine a messaging score associated with the achievement pictograph, determine whether the message activity communication dictates an adjustment of the message activity score, further determine whether the message activity score transgresses a first threshold activity score, and display the achievement pictograph.

[0018] In additional example embodiments, the achievement pictographs may be ephemeral and the system can access deletion data that designates when the display of the pictograph may be removed. For example, the achievement pictograph may be removed if the message activity score falls below a certain value (e.g. transgresses a second activity threshold). The system can further notify a user, about a new achievement pictograph or the removal of an achievement pictograph by way of a notification window on a client device.

[0019] In an example embodiment, a user may send a message to a contact using a social messaging system. Some systems will additionally receive a message activity communication that contains data about the message. Within the social messaging system, the message achievement pictograph display system uses this data to adjust a message activity score related to messages sent between the user and

the contact. In some embodiments, the message achievement pictograph display system further compares the adjusted message activity score to a first threshold activity score. If the message activity score transgresses the first threshold activity score (e.g. passes a threshold), then the contact is designated as a "best friend" of the user and an achievement pictograph is displayed on the client device. The user can be notified of the new "best friend" status of the contact using a notification window. At a later time, if the message activity score transgresses a second threshold activity score (e.g. falls below a second threshold), the contact no longer qualifies as a "best friend" and the achievement pictograph is removed from display. Other embodiments may manage achievements in other ways in accordance with other embodiments described herein.

[0020] FIG. **1** is a network diagram depicting a network system **100** having a client-server architecture configured for exchanging data over a network, according to one embodiment. For example, the network system **100** may be a messaging system where clients communicate and exchange data within the network system **100**. The data may pertain to various functions (e.g., sending and receiving text and media communication, determining geolocation, etc.) and aspects (e.g., transmission of messages between client devices and servers) associated with the network system **100** and its users. Although illustrated herein as client-server architecture, other embodiments may include other network architectures, such as peer-to-peer or distributed network environments.

[0021] As shown in FIG. **1**, the network system **100** includes a social messaging system **130**. The social messaging system **130** is generally based on a three-tiered architecture, consisting of an interface layer **124**, an application logic layer **126**, and a data layer **128**. As is understood by skilled artisans in the relevant computer and Internet-related arts, each module or engine shown in FIG. **1** represents a set of executable software instructions and the corresponding hardware (e.g., memory and processor) for executing the instructions. To avoid obscuring the inventive subject matter with unnecessary detail, various functional modules and engines that are not germane to conveying an understanding of the inventive subject matter have been omitted from FIG. **1**. Additional functional modules and engines may be used with a social messaging system **130**, such as that illustrated in FIG. **1**, to facilitate additional functionality that is not specifically described herein. Furthermore, the various functional modules and engines depicted in FIG. **1** may reside on a single server computer, or may be distributed across several server computers in various arrangements. Moreover, although the social messaging system **130** is depicted in FIG. **1** as a three-tiered architecture, the inventive subject matter is by no means limited to such an architecture.

[0022] As shown in FIG. **1**, the interface layer **124** consists of interface module(s) (e.g., a web server) **140**, which receive requests from various client-computing devices and servers, such as client devices **110**A and **110**B executing client application **112**. In response to received requests, the interface module(s) **140** communicate appropriate responses to requesting devices via a network **104**. For example, the interface module **140** can receive requests such as Hypertext Transfer Protocol (HTTP) requests, or other web-based Application Programming Interface (API) requests.

[0023] The client devices **110**A and **110**B can execute conventional web browser applications or applications (also referred to as "apps") that have been developed for a specific platform to include any of a wide variety of mobile computing devices and mobile-specific operating systems (e.g., IOS™, ANDROID™, WINDOWS® PHONE). In an example, the client device(s) **110** are executing the client application **112**. The client application **112** can provide functionality to present information to a first user **106** or a second user **108** and communicate via the network **104** to exchange information with the social messaging system **130**. Each of the client devices **110**A and **110**B can comprise a computing device that includes at least a display and communication capabilities with the network **104** to access the social messaging system **130**. The client devices **110**A and **110**B comprise, but are not limited to, remote devices, work stations, computers, general purpose computers, Internet appliances, hand-held devices, wireless devices, portable devices, wearable computers, cellular or mobile phones, personal digital assistants (PDAs), smart phones, tablets, ultrabooks, netbooks, laptops, desktops, multi-processor systems, microprocessor-based or programmable consumer electronics, game consoles, set-top boxes, network PCs, mini-computers, and the like. User(s) **106** can be a person, a machine, or other means of interacting with the client devices **110**A and **110**B. In some embodiments, the users **106** and **108** interact with the social messaging system **130** via the client devices **110**A and **110**B.

[0024] As shown in FIG. **1**, the data layer **128** has database server(s) **132** that facilitate access to information storage repositories or database(s) **134**. The database(s) **134** are storage devices that store data such as member profile data, social graph data (e.g., relationships between members of the social messaging system **130**), and other user data.

[0025] An individual can register with the social messaging system **130** to become a member of the social messaging system **130**. Once registered, a member can form social network relationships (e.g., friends, followers, or contacts) on the social messaging system **130** and interact with a broad range of applications provided by the social messaging system **130**.

[0026] The application logic layer **126** includes various application logic module(s) **150**, which, in conjunction with the interface module(s) **140**, generate various user interfaces with data retrieved from various data sources or data services in the data layer **128**. Individual application logic module(s) **150** may be used to implement the functionality associated with various applications, services, and features of the social messaging system **130**. For instance, a social messaging application can be implemented with one or more of the application logic module(s) **150**. The social messaging application provides a messaging mechanism for users of the client devices **110**A and **110**B to send and receive messages that include text and media content such as pictures and video. The client devices **110**A and **110**B may access and view the messages from the social messaging application for a specified period of time (e.g., limited or unlimited). In an example, a particular message is accessible to a message recipient for a predefined duration (e.g., specified by a message sender) that begins when the particular message is first accessed. After the predefined duration elapses, the message is deleted and is no longer accessible to the message recipient. In various embodiments, other applica-

tions and services may be separately embodied in their own application server module(s) **150**.

[0027] As illustrated in FIG. **1**, the social messaging system **130** includes a messaging achievement pictograph display system **160**. In various embodiments, the messaging achievement pictograph display system **160** can be implemented as a standalone system operating on a separate computing device with one or more processors, and is not necessarily included in the social messaging system **130**. In some embodiments, the client devices **110**A and **110**B include a portion of the messaging achievement pictograph display system **160**. (e.g., a portion of the messaging achievement pictograph display system **160** included independently or in the client application **112**). In embodiments where the client devices **110**A and **110**B includes a portion of the messaging achievement pictograph display system **160**, the client devices **110**A and **110**B can work alone or in conjunction with the portion of the messaging achievement pictograph display system **160** included in a particular application server or included in the social messaging system **130**.

[0028] FIG. **2** is a block diagram **200** of the messaging achievement pictograph display system **160** according to some example embodiments. Other embodiments may be implemented using various other structures. The messaging achievement pictograph display system **160** is shown to include a communication engine **210**, an adjustment engine **220**, a parameter engine **230**, a trigger engine **240**, and a display engine **250**. All, or some, of the modules **210**-**250** communicate with each other, for example, via a network coupling, shared memory, and the like. Each module of the modules can be implemented as a single module, combined into other modules, or further subdivided into multiple modules. Other modules not pertinent to example embodiments can also be included, but are not shown.

[0029] The communication module **210** provides various communications functionality. For example, in some embodiments the communication engine **210** receives messaging activity data from the client devices **110**A and **110**B and accesses databases **134** using the database server **132** to retrieve message indicators and parameter indicators. In a specific example, the communication module retrieves a message activity communication that contains data related to a message sent from the first user **106** and the second user **108**. The communication engine **210** additionally retrieves, from the databases **134**, a message indicator containing a message activity score related to the data within the message activity communication. Finally, the communication engine **210** retrieves a parameter indicator containing a first threshold activity score related to the message activity score and an achievement pictograph. The communication module **210** further exchanges network communications with the database server **132**, and the client devices **110**A and **110**B. The information retrieved by the communication module **210** includes data associated with the user (e.g., member profile data from an online account or social network service data) or other data to facilitate the functionality described herein.

[0030] The adjustment engine **220** provides functionality to determine a score adjustment for a message activity score and make the adjustment. For example, the adjustment engine **220** determines, based on data contained in a message activity communication, that a message activity score should be increased or decreased by a certain amount. Continuing the example above, the adjustment engine **220** may determine that a message activity score related to the first user **106** and the second user **108** should be increased from a lower score to a higher score based on the message activity communication.

[0031] The parameter engine **230** provides functionality to match a parameter indicator to a message indicator, determine whether a message activity score transgresses a first or a second threshold activity score, and cause the display engine **250** to display an achievement pictograph. For example, the parameter engine may determine that a parameter indicator matches a message indicator and that a message activity score included in the message indicator transgresses a first threshold activity score because the message activity score is equal to or greater than the first threshold activity score. The parameter engine **230** then communicates with the display engine **250** to cause the display engine **250** to display the achievement pictograph.

[0032] Continuing the example above, the parameter engine **230** determines that a parameter indicator matches the message indicator and compares the message activity score that was adjusted due to the message to a first threshold activity score. Transgressing the first threshold activity score may indicate that an achievement pictograph be displayed showing that the first user **106** and the second user **108** (e.g. accounts associated with users) are "best friends." In this example, the parameter engine **130** determines that the message activity score does transgress the first threshold activity score, and the parameter engine **130** further causes the display engine to display an achievement pictograph that is included in the message indicator.

[0033] The trigger engine **240** provides functionality to display a notification to a user about an achievement pictograph display or initiate removal of an achievement pictograph. For example, the trigger engine notifies the first user **106** that an achievement pictograph will be deleted unless the first user **106** takes a specific action, such as sending a message to the second user **108**. The trigger engine can further determine that a specific type of achievement pictograph will be removed after a certain day and can cause the display engine **250** to remove the achievement pictograph after the day is over.

[0034] The display engine **250** provides various presentation and user interface functionality operable to interactively present and receive information to and from the user. For example, the display engine **250** is utilizable to present or remove achievement pictographs based on communications from the parameter engine **230** or the trigger engine **240**. In various embodiments, the display engine **250** presents or causes presentation of information (e.g., visually displaying information on a screen, acoustic output, haptic feedback). The process of interactively presenting information is intended to include the exchange of information between a particular device and the user. The user may provide input to interact with the user interface in many possible manners, such as alphanumeric, point based (e.g., cursor), tactile, or other input (e.g., touch screen, tactile sensor, light sensor, infrared sensor, biometric sensor, microphone, gyroscope, accelerometer, or other sensors). The display engine **250** provides many other user interfaces to facilitate functionality described herein. The term "presenting" as used herein is intended to include communicating information or instructions to a particular device that is operable to perform presentation based on the communicated information or instructions.

[0035] In addition to the embodiments described above, a messaging achievement pictograph display system **160**, in some embodiments, tracks multiple achievements scores and thresholds associated with two or more user accounts. For example, one achievement score and associated threshold(s) may be associated with message frequency, one achievement and associated threshold(s) may be associated with a length of time that accounts have gone without allowing a timing threshold to expire between communications, one achievement and associated threshold(s) may be associated with particular types of communications or communication metadata (e.g. location, filters, message content type, etcetera). In various other embodiments, any other such achievement scores and associated thresholds may be used. Additionally, such scores may be tracked for associations or relationships between any number of users or user accounts in a system, such that any account that has communicated with any other account may generate one or more achievement scores associated between those accounts.

[0036] FIG. **3** is a flow diagram illustrating an example method **300** for causing display of a messaging achievement pictograph based on messaging activity. The operations of the method **300** may be performed by components of the messaging achievement pictograph system **160**, and are so described below for the purposes of illustration.

[0037] At operation **310**, the communication engine **210** receives, from the first client device **110**A, a message activity communication that includes data about a message. The message is a communication sent from or received by the first client device **110**A correlated with the first user **106** and may include a textual message, image message, or video message that is sent to or received from the second client device **110**B correlated with the second user **108**. The message could further include data that the first user **106** submits to the social messaging system **130** using the client application **112**. The communication engine **310** may receive the message activity over the network **104** and through the social messaging system **130**.

[0038] In an example embodiment, the first user **106** sends, using the client application **112** on the first client device **110**A, an ephemeral video message with an automatic deletion trigger to the second client device **110**B. The client application **112** on the first client device **110**A additionally sends a message activity communication to the communication engine **210**, the message activity communication including data about the message. In this example, the data could include information that the message is an ephemeral video message that is seven seconds length and containing an additional image overlay as well as a text overlay.

[0039] In another example embodiment, the first user **106** may take a digital photograph, using the client application **112** on the first client device **130**, of the first user's pet cat, and scan the image, such that the image is uploaded to the social messaging system **130**. In this example, the communication engine **130** similarly receives a message activity communication about the message (e.g. image) to the social messaging system **130**. The data in this example could include information about when the image was taken and that the client application **112** has recognized the image as being a picture of a cat.

[0040] At operation **320**, the communication engine **210** accesses a message indicator from one or more of the databases **134** using the database server **132**. The message indicator includes a message activity score (e.g. a numerical value between 0 and 100) that is based on past messages sent from or received by the client device.

[0041] In some example embodiments, the message activity score may be based on the volume and form of messages exchanged between the first client device **110**A and the second client device **110**B. For example, the message activity score from the above example involving the seven second video ephemeral message may only be based on ephemeral video messages occurring between the first user **106** and the second user **108**. In the other example involving the picture of the cat, the messaging activity may only be based on images uploaded from the first client device **110**A to the social messaging system **130** that the client application **112** recognizes as being an image of a cat.

[0042] In operation **330**, responsive to the communication engine **210** receiving the message activity communication and accessing a message activity score from one or more databases **134**, the adjustment engine **220** adjusts the message activity score based on the message activity communication. For example, the adjustment engine **220** may determine that the data about the message processed by the first user device **110**A and included in the message activity communication has a numerical weight in relation to the message activity score based on the type of message and length of message, among other factors. In the example, the numerical weight determined by the adjustment engine **220** may be added directly to the message activity score associated with the message indicator.

[0043] In an example embodiment, several message activity scores may be accessed by the communication engine **210** and adjusted by the adjustment engine **220** based on the same message activity communication. In the previous example involving the seven second ephemeral video message, a first message activity score may be based on at least one video message being sent from the first user **106** to the second user **108** and at least one video message being sent from the second user **108** to the first user **106** within the past 24 hours. Additionally, a second message activity score may be based on the total number of text, image, and video messages exchanged between the first user **106** and the second user **108**. Thus, the adjustment engine **220** may make or abstain from making adjustments to the first message activity score or the second activity score based on the content of the message. In this example, the adjustment engine **220** adds a weighted value to the first message activity score since the data about the ephemeral video message details that the message was sent from the first client device **110**A within the last 24 hours. The adjustment engine **220** additionally adds a weighted value to the second message activity score since the ephemeral video message counts as any message between the first user **106** and the second user **108** over the client application **112**.

[0044] In some embodiments, the weighted value added to the score may have a time limit condition such that the adjustment engine **220** automatically removes the weight previously added after a designated amount of time. For example, in the above illustration, the first message activity score is only adjustable by the adjustment engine **220** if the ephemeral video message was sent or received by the first client device **110**A in the past 24 hours. After 24 hours elapses, the adjustment engine may automatically remove the weight added to the first messaging score that was based on the messaging activity communication. Thus, adjust-

ments to a message activity score may have time limits and "expire" at the end of the time limit. In other embodiments, any other such time limit conditions may be used (e.g. 30 minutes, one hour, one week, etcetera.)

[0045] At operation **340** and **350**, responsive to the adjustment engine **220** making an adjustment to the message activity score, the communication engine **210** accesses a parameter indicator (e.g. a unique data marker) that includes a first threshold activity score and an achievement pictograph and the parameter engine **230** matches the message indicator to the parameter indicator. The parameter indicator may be located in at least one database **134** and accessible by the communication engine **210** over the database server **132**. In some embodiments, the communication engine **210** may access more than one parameter indicator and in further example embodiments, the parameter engine **230** may determine that more than one parameter indicator matches the message indicator.

[0046] In the above example involving the user taking a picture of the cat, the communication engine **210** may access a parameter indicator that is linked to a threshold activity score. The threshold activity score in this example, is based on a number of uploads of cat images using the client application **112** in order to receive an achievement. In the case where the message activity score is based on the number of cat images that the first user **106** has uploaded to the social messaging system **130** using the client application **112**, the parameter engine **230** will determine that the parameter indicator matches the message indicator.

[0047] In operation **360**, the parameter engine **230** further determines the message activity score transgresses the threshold activity score. In example embodiments, the message activity score may transgress the threshold activity score by exceeding a maximum activity score, or by falling below a minimum activity score.

[0048] In the above example involving the user taking a picture of the cat, the threshold activity score may designate an achievement pictograph be displayed if five images of cats are uploaded by a client device. The first user **106**, in this example, has just uploaded, using the client application **130**, her fifth picture of a cat with the first user device **110**A. The message activity score, as adjusted by the adjustment engine **320**, would therefore have a score of 5 since a weight of 1 would be added to the message activity score by the adjustment engine for every cat image. In the example, the parameter engine **330** determines that the message activity score of 5 transgresses the threshold activity score of 5.

[0049] In operation **370**, the display engine **250**, responsive to the parameter engine **230** determining the message activity score transgresses the threshold activity score, displays the achievement pictograph included in the parameter indicator on the first client device **110**A. In some example embodiments, the trigger engine **240**, responsive to the display of the pictograph, retrieves a notification image from one or more of the databases **134** over the database server **132** and causes the display engine **250** to display the notification on the first client device **110**A.

[0050] For example, in response to the message activity score of 5 transgressing the threshold activity score for images of a cat uploaded to the social messaging system **130**, display engine **250** accesses the pictograph that is included in the message indicator and cause display of the pictograph within the client application **112** on the first client device **110**A. Additionally, the trigger engine **240**, responsive to the display of the pictograph, accesses a notification image that describes the achievement to the first user **106** and causes the display engine **250** to display the notification.

[0051] In the example, the first user **106** views the notification as an automatically generated window within the client application **112** on the client device. The notification displays a textual achievement message to the user, such as "Five Cat Pics Scanned" and may include a display of the achievement pictograph within the notification. In this case, the achievement pictograph could be a cartoon image of the face of a cat.

[0052] The method of display of the achievement pictograph may vary across different embodiments of the system. In an example embodiment, the pictograph is displayed in a designated section of the client application **112** for achievement pictographs (e.g. a "trophy case"). In the embodiment, the first user **106** "collects" the achievement pictographs which are aggregated in a display designated for the pictographs. Once a pictograph is collected, it is permanently viewable by the first user **106** within the client application **112**. An

[0053] In another example embodiment, the achievement pictograph may be ephemeral on the client application **112** and the display engine **250** may remove the achievement pictograph at a later time. For example, the display engine **250** may display an achievement pictograph next to a contact information of the second user **108** on a messaging screen of the client application **112** where the achievement pictograph relates to communications between the first user **106** and the second user **108**. In this example embodiment, he trigger engine **240** may access deletion data stored on one or more of the databases **134** stored on one or more of the databases, the deletion data designating that the display engine **250** remove the achievement pictograph be removed at a designated time or after a designated amount of time. At the designated time or after the designated amount of time, the trigger engine **240** determines that the achievement pictograph should be deleted and causes the display engine **250** to remove the achievement pictograph from view on the client application **112**.

[0054] In an example, the messaging achievement pictograph display system causes display of a shamrock on the messaging screen of the client application **112** on a first client device **110**A next to contact information of the second user **108** if the first user **106** sends an ephemeral video message about St. Patrick's Day to the second user **108** on March 17^{th}. The communication engine **210** receives a message activity communication including data about a message sent from the first user **106** to the second user **108**. The communication engine further accesses a message indicator related to ephemeral video messages sent on St. Patrick's Day that includes a message score. Since the message activity communication contains data about an ephemeral video message sent on March 17^{th} (St. Patrick's Day), the adjustment engine **220** adjusts the message activity score from 0 to 1. The communication engine **210** then accesses a parameter indicator that includes a threshold activity score for the shamrock achievement and the shamrock achievement pictograph. The parameter engine **230** then matches the message indicator the parameter indicator and determines whether the message activity score transgresses the threshold activity score. In this case, since the scores are binary (either there is an ephemeral video message sent on March 17^{th} or there is not), the parameter engine

230 determines the message activity score transgresses the threshold activity score and causes the display engine **250** to display the shamrock achievement pictograph next to the contact information of the second user **108** on the messaging screen of the client application **112** on the first client device **11**A. The trigger engine **240** may further access notification data and cause the display engine **250** to display a notification window on the client application **112** within the first client device **110**A, the notification window notifying the first user **106** about the achievement pictograph. The trigger engine **240** may also access deletion data that designates all achievement pictographs related to St. Patrick's Day should be removed at 12:00 am on March 18th. Thus at 12 am on March 18th, the trigger engine would cause the display engine **150** to remove the shamrock achievement pictograph from the messaging screen.

[0055] FIGS. **4** and **5** are flowcharts illustrating additional operations of the messaging achievement pictograph display system **110**, according to some example embodiments. In some example embodiments, the method **300** includes additional sub-operations occurring after operation **370**. For example, the method **300** may include operations **410**, **420**, and **430** as depicted in FIG. **4**. In some example embodiments, operations **410**, **420**, and **430** included in the method **300** may be performed as part (e.g., a precursor task, a subroutine, or a portion) of or subsequent to operation **340** of method **300**, in which the display engine **250** displays an achievement pictograph on the client application **112** on the first client device **110**A.

[0056] At operation **410**, the parameter engine **230** detects that an achievement pictograph is currently displayed on the client application **112** by the display engine. At **420**, the parameter engine **230** further detects that the message activity score that previously transgressed the first activity threshold now transgresses a second activity threshold activity score. Responsive to the message activity score transgressing the second threshold activity score, the parameter engine **230** causes the display engine **250** to remove the achievement pictograph from the client application **112** on the first user device.

[0057] In an example embodiment, the display engine **250** may display an achievement pictograph on the messaging screen of the client application **112** next to contact information of the second user **108**, the achievement pictograph awarded to friends (e.g. saved contacts) of the second user that are determined to be one of the ten "closest" friends to the user. The "closeness" of friends to the second user **108** may be determined, using a message activity score, by the form, frequency, and timeframe of messages between the second user **108** and a friend. For example, the adjustment engine **220** could determine a higher weight to video messages from the second user **108** to the friend than text messages, resulting in the adjustment engine **220** raising the message activity score by a greater degree for a video message than for a text message.

[0058] In the above example, the first threshold activity score would be the message activity score needed at a previous time for the first user to be in the "top ten" friends for the second user **108**. Since the pictograph is displayed, the first user's **106** message activity score transgressed the first threshold activity score at the previous time and allowed the first user **106** to receive the achievement. However, since the "closeness" between the second user **108** and the user's friends may change over time, first threshold activity score from the previous time may change to a second threshold activity score at a current time. For instance, if the second user **108** has become much more active on the social messaging system **130**, the second user **108** may have added new friends or increased messaging frequency with other friends. In this example, the first user's **106** message activity score related to closeness with the second user transgresses the second threshold activity score by falling below the score. The parameter engine **230** determines that the message activity score has transgressed the second threshold score, and causes the display engine **250** to remove the "top ten friends" achievement pictograph that was displayed on the client application **112** on the first user device **112**. Thus, the achievement pictographs may be removed based on a designated time, a timeframe, or based on activity by other users.

[0059] In some example embodiments, operations **510**, **520**, and **530** included in the method **300** may be performed as part (e.g., a precursor task, a subroutine, or a portion) of operation **340** of method **300**, in which the display engine **250** displays an achievement pictograph on the client application **112** on the first client device **110**A.

[0060] In operation **510-520**, the trigger engine **240** detects a specific quantity of time remaining in a designated time frame and determines that, after expiration of the time frame, a second threshold quantity will be transgressed such that the parameter engine **230** will remove the achievement pictograph. In operation **530**, the trigger engine **240** causes the display engine **250** to display a notification window warning the user that the achievement pictograph will be removed after expiration of the time limit and displaying the time of expiration.

[0061] For example, in the above illustration involving the seven second ephemeral video message, the parameter engine **230** detects that the display engine **250** displays an achievement pictograph on the client application **112** on the first client device **110**A in response to ephemeral video messages being exchanged between the first client device **110**A and the second client device **110**B. If the first user **106** has failed to send an ephemeral video message to the second user **108** for 24 hours, this may cause the adjustment engine **120** to lower the message activity score such that the parameter engine **130** determines that the message activity score transgresses a second threshold activity score and causes the display engine **150** to remove the achievement pictograph. In the example, if the first user **106** has failed to send an ephemeral video message to the second user **108** for 23 hours and 30 minutes, the trigger engine **240** causes the display engine **250** to display a notification window warning the user that the pictograph will be removed in 30 minutes unless the first user **106** sends an ephemeral video message to the second user **108**.

[0062] FIGS. **6** and **7** are interface diagrams that display the client application **112** running on the first user device **110**A. The first user device **110**A may include a trophy interface **610** that is displayed on a graphical user interface **605** of the first user device **110**A. Within the trophy interface **610**, various achievement pictographs **620** in the form of emojis may be displayed. Further, the trophy interface **610** may also contain pictographs that represent achievement pictographs that have not yet been unlocked **630** in the form of a "lock emoji." When a new achievement pictograph is unlocked, a notification window **710** within the trophy interface may be displayed containing an image of the

achievement pictograph **720**, as well as a description of the achievement **730**. The achievement pictograph may now further be visible in the trophy interface **740**.

[0063] FIGS. **8** and **9** are also interface diagrams that display aspects of a client application such as the client application **112** running on the first user device **110**A. The first user device **110**A may include a messaging interface **810** that is displayed on the graphic user interface **605**. The messaging interface may include a search box **820** in which the first user **106** can search for contacts based on contact information. The messaging interface **810** additionally includes a list of contacts with displays the contact information **830** of each contact including a name of the contact and an icon that shows the type of message exchanged with the contact (an arrow represents an ephemeral video message and a block represents a text message). Also displayed on the messaging interface are achievement pictographs in the form of emojis **840**, **850**. The smile with closed eyes emoji **840** represents that the first user **106** is "best friends" with the contact, in that the contact is in the top ten friends of the first user **106** in terms of "closeness" based on the messages exchanged. In contrast, an emoji with sunglasses on represents that the contact is "best friends" with the first user **106** but the first user is not "best friends" with the contact (the first user **106** is in the contact's top ten friends, but the contact is not in the first user's **106** top ten friends).

[0064] The "fire" emoji represents that the user and the contact are on a "snap streak" in that first user **106** and the contact have each sent each other an ephemeral video message in the last 24 hours. The "4" designation shows that this is the fourth continuous iteration of a snap streak between first user **106** and the contact, meaning that the first user **106** and the contact have each exchanged four messages with each other without 24 hours elapsing between messages. If a snap streak is about to expire, a notification display window **910** may be displayed with an image of the snap streak emoji **920** and a message **930** detailing how the user can avoid letting the snap streak expire.

[0065] When these effects are considered in aggregate, one or more of the methodologies described herein may obviate a need for certain efforts or resources that otherwise would be involved in messaging achievement pictograph display. Efforts expended by the user **132** in asset allocation evaluation may be reduced by use of (e.g., reliance upon) a special-purpose machine that implements one or more of the methodologies described herein. Computing resources used by one or more systems or machines (e.g., within the network environment **100**) may similarly be reduced (e.g., compared to systems or machines that lack the structures discussed herein or are otherwise unable to perform the functions discussed herein). Examples of such computing resources include processor cycles, network traffic, computational capacity, main memory usage, graphics rendering capacity, graphics memory usage, data storage capacity, power consumption, and cooling capacity.

Modules, Components, and Logic

[0066] Certain embodiments are described herein as including logic or a number of components, modules, or mechanisms. Modules can constitute either software modules (e.g., code embodied on a machine-readable medium or in a transmission signal) or hardware modules. A "hardware module" is a tangible unit capable of performing certain operations and can be configured or arranged in a certain physical manner. In various example embodiments, one or more computer systems (e.g., a standalone computer system, a client computer system, or a server computer system) or one or more hardware modules of a computer system (e.g., a processor or a group of processors) is configured by software (e.g., an application or application portion) as a hardware module that operates to perform certain operations as described herein.

[0067] In some embodiments, a hardware module is implemented mechanically, electronically, or any suitable combination thereof. For example, a hardware module can include dedicated circuitry or logic that is permanently configured to perform certain operations. For example, a hardware module can be a special-purpose processor, such as a Field-Programmable Gate Array (FPGA) or an Application Specific Integrated Circuit (ASIC). A hardware module may also include programmable logic or circuitry that is temporarily configured by software to perform certain operations. For example, a hardware module can include software encompassed within a general-purpose processor or other programmable processor. It will be appreciated that the decision to implement a hardware module mechanically, in dedicated and permanently configured circuitry, or in temporarily configured circuitry (e.g., configured by software) can be driven by cost and time considerations.

[0068] Accordingly, the phrase "hardware module" should be understood to encompass a tangible entity, be that an entity that is physically constructed, permanently configured (e.g., hardwired), or temporarily configured (e.g., programmed) to operate in a certain manner or to perform certain operations described herein. As used herein, "hardware-implemented module" refers to a hardware module. Considering embodiments in which hardware modules are temporarily configured (e.g., programmed), each of the hardware modules need not be configured or instantiated at any one instance in time. For example, where a hardware module comprises a general-purpose processor configured by software to become a special-purpose processor, the general-purpose processor may be configured as respectively different special-purpose processors (e.g., comprising different hardware modules) at different times. Software can accordingly configure a particular processor or processors, for example, to constitute a particular hardware module at one instance of time and to constitute a different hardware module at a different instance of time.

[0069] Hardware modules can provide information to, and receive information from, other hardware modules. Accordingly, the described hardware modules can be regarded as being communicatively coupled. Where multiple hardware modules exist contemporaneously, communications can be achieved through signal transmission (e.g., over appropriate circuits and buses) between or among two or more of the hardware modules. In embodiments in which multiple hardware modules are configured or instantiated at different times, communications between such hardware modules may be achieved, for example, through the storage and retrieval of information in memory structures to which the multiple hardware modules have access. For example, one hardware module performs an operation and stores the output of that operation in a memory device to which it is communicatively coupled. A further hardware module can then, at a later time, access the memory device to retrieve and process the stored output. Hardware modules can also

initiate communications with input or output devices, and can operate on a resource (e.g., a collection of information).

[0070] The various operations of example methods described herein can be performed, at least partially, by one or more processors that are temporarily configured (e.g., by software) or permanently configured to perform the relevant operations. Whether temporarily or permanently configured, such processors constitute processor-implemented modules that operate to perform one or more operations or functions described herein. As used herein, "processor-implemented module" refers to a hardware module implemented using one or more processors.

[0071] Similarly, the methods described herein can be at least partially processor-implemented, with a particular processor or processors being an example of hardware. For example, at least some of the operations of a method can be performed by one or more processors or processor-implemented modules. Moreover, the one or more processors may also operate to support performance of the relevant operations in a "cloud computing" environment or as a "software as a service" (SaaS). For example, at least some of the operations may be performed by a group of computers (as examples of machines including processors), with these operations being accessible via a network (e.g., the Internet) and via one or more appropriate interfaces (e.g., an Application Program Interface (API)).

[0072] The performance of certain of the operations may be distributed among the processors, not only residing within a single machine, but deployed across a number of machines. In some example embodiments, the processors or processor-implemented modules are located in a single geographic location (e.g., within a home environment, an office environment, or a server farm). In other example embodiments, the processors or processor-implemented modules are distributed across a number of geographic locations.

Software Architecture

[0073] FIG. **10** is a block diagram **1000** illustrating an architecture of software **1002**, which can be installed on any one or more of the devices described above. FIG. **10** is merely a non-limiting example of a software architecture, and it will be appreciated that many other architectures can be implemented to facilitate the functionality described herein. In various embodiments, the software **1002** is implemented by hardware such as a machine **1100** of FIG. **11** that includes processors **1110**, memory **1130**, and I/O components **1150**. In this example architecture, the software **1002** can be conceptualized as a stack of layers where each layer may provide a particular functionality. For example, the software **1002** includes layers such as an operating system **1004**, libraries **1006**, frameworks **1008**, and applications **1010**. Operationally, the applications **1010** invoke application programming interface (API) calls **1012** through the software stack and receive messages **1014** in response to the API calls **1012**, consistent with some embodiments.

[0074] In various implementations, the operating system **1004** manages hardware resources and provides common services. The operating system **1004** includes, for example, a kernel **1020**, services **1022**, and drivers **1024**. The kernel **1020** acts as an abstraction layer between the hardware and the other software layers consistent with some embodiments. For example, the kernel **1020** provides memory management, processor management (e.g., scheduling), component management, networking, and security settings, among other functionality. The services **1022** can provide other common services for the other software layers. The drivers **1024** are responsible for controlling or interfacing with the underlying hardware, according to some embodiments. For instance, the drivers **1024** can include display drivers, camera drivers, BLUETOOTH® drivers, flash memory drivers, serial communication drivers (e.g., Universal Serial Bus (USB) drivers), WI-FI® drivers, audio drivers, power management drivers, and so forth.

[0075] In some embodiments, the libraries **1006** provide a low-level common infrastructure utilized by the applications **1010**. The libraries **1006** can include system libraries **1030** (e.g., C standard library) that can provide functions such as memory allocation functions, string manipulation functions, mathematic functions, and the like. In addition, the libraries **1006** can include API libraries **1032** such as media libraries (e.g., libraries to support presentation and manipulation of various media formats such as Moving Picture Experts Group-4 (MPEG4), Advanced Video Coding (H.264 or AVC), Moving Picture Experts Group Layer-3 (MP3), Advanced Audio Coding (AAC), Adaptive Multi-Rate (AMR) audio codec, Joint Photographic Experts Group (JPEG or JPG), or Portable Network Graphics (PNG)), graphics libraries (e.g., an OpenGL framework used to render in two dimensions (2D) and three dimensions (3D) in a graphic context on a display), database libraries (e.g., SQLite to provide various relational database functions), web libraries (e.g., WebKit to provide web browsing functionality), and the like. The libraries **1006** can also include a wide variety of other libraries **1034** to provide many other APIs to the applications **1010**.

[0076] The frameworks **1008** provide a high-level common infrastructure that can be utilized by the applications **1010**, according to some embodiments. For example, the frameworks **1008** provide various graphic user interface (GUI) functions, high-level resource management, high-level location services, and so forth. The frameworks **1008** can provide a broad spectrum of other APIs that can be utilized by the applications **1010**, some of which may be specific to a particular operating system or platform.

[0077] In an example embodiment, the applications **1010** include a home application **1050**, a contacts application **1052**, a browser application **1054**, a book reader application **1056**, a location application **1058**, a media application **1060**, a messaging application **1062**, a game application **1064**, and a broad assortment of other applications such as a third party application **1066**. According to some embodiments, the applications **1010** are programs that execute functions defined in the programs. Various programming languages can be employed to create one or more of the applications **1010**, structured in a variety of manners, such as object-oriented programming languages (e.g., Objective-C, Java, or C++) or procedural programming languages (e.g., C or assembly language). In a specific example, the third party application **1066** (e.g., an application developed using the ANDROID™ or IOS™ software development kit (SDK) by an entity other than the vendor of the particular platform) may be mobile software running on a mobile operating system such as IOS™, ANDROID™, WINDOWS® PHONE, or another mobile operating system. In this example, the third party application **1066** can invoke the API calls **1012** provided by the operating system **1004** to facilitate functionality described herein.

Example Machine Architecture and Machine-Readable Medium

[0078] FIG. **11** is a block diagram illustrating components of a machine **1100**, according to some embodiments, able to read instructions from a machine-readable medium (e.g., a machine-readable storage medium) and perform any one or more of the methodologies discussed herein. Specifically, FIG. **11** shows a diagrammatic representation of the machine **1100** in the example form of a computer system, within which instructions **1116** (e.g., software, a program, an application, an applet, an app, or other executable code) for causing the machine **1100** to perform any one or more of the methodologies discussed herein can be executed. In alternative embodiments, the machine **1100** operates as a standalone device or can be coupled (e.g., networked) to other machines. In a networked deployment, the machine **1100** may operate in the capacity of a server machine or a client machine in a server-client network environment, or as a peer machine in a peer-to-peer (or distributed) network environment. The machine **1100** can comprise, but not be limited to, a server computer, a client computer, a personal computer (PC), a tablet computer, a laptop computer, a netbook, a set-top box (STB), a personal digital assistant (PDA), an entertainment media system, a cellular telephone, a smart phone, a mobile device, a wearable device (e.g., a smart watch), a smart home device (e.g., a smart appliance), other smart devices, a web appliance, a network router, a network switch, a network bridge, or any machine capable of executing the instructions **1116**, sequentially or otherwise, that specify actions to be taken by the machine **1100**. Further, while only a single machine **1100** is illustrated, the term "machine" shall also be taken to include a collection of machines **1100** that individually or jointly execute the instructions **1116** to perform any one or more of the methodologies discussed herein.

[0079] In various embodiments, the machine **1100** comprises processors **1110**, memory **1130**, and I/O components **1150**, which can be configured to communicate with each other via a bus **1102**. In an example embodiment, the processors **1110** (e.g., a Central Processing Unit (CPU), a Reduced Instruction Set Computing (RISC) processor, a Complex Instruction Set Computing (CISC) processor, a Graphics Processing Unit (GPU), a Digital Signal Processor (DSP), an Application Specific Integrated Circuit (ASIC), a Radio-Frequency Integrated Circuit (RFIC), another processor, or any suitable combination thereof) include, for example, a processor **1112** and a processor **1114** that may execute the instructions **1116**. The term "processor" is intended to include multi-core processors that may comprise two or more independent processors (also referred to as "cores") that can execute instructions contemporaneously. Although FIG. **11** shows multiple processors, the machine **1100** may include a single processor with a single core, a single processor with multiple cores (e.g., a multi-core processor), multiple processors with a single core, multiple processors with multiples cores, or any combination thereof.

[0080] The memory **1130** comprises a main memory **1132**, a static memory **1134**, and a storage unit **1136** accessible to the processors **1110** via the bus **1102**, according to some embodiments. The storage unit **1136** can include a machine-readable medium **1138** on which are stored the instructions **1116** embodying any one or more of the methodologies or functions described herein. The instructions **1116** can also reside, completely or at least partially, within the main memory **1132**, within the static memory **1134**, within at least one of the processors **1110** (e.g., within the processor's cache memory), or any suitable combination thereof, during execution thereof by the machine **1100**. Accordingly, in various embodiments, the main memory **1132**, the static memory **1134**, and the processors **1110** are considered machine-readable media **1138**.

[0081] As used herein, the term "memory" refers to a machine-readable medium **1138** able to store data temporarily or permanently and may be taken to include, but not be limited to, random-access memory (RAM), read-only memory (ROM), buffer memory, flash memory, and cache memory. While the machine-readable medium **1138** is shown in an example embodiment to be a single medium, the term "machine-readable medium" should be taken to include a single medium or multiple media (e.g., a centralized or distributed database, or associated caches and servers) able to store the instructions **1116**. The term "machine-readable medium" shall also be taken to include any medium, or combination of multiple media, that is capable of storing instructions (e.g., instructions **1116**) for execution by a machine (e.g., machine **1100**), such that the instructions, when executed by one or more processors of the machine **1100** (e.g., processors **1110**), cause the machine **1100** to perform any one or more of the methodologies described herein. Accordingly, a "machine-readable medium" refers to a single storage apparatus or device, as well as "cloud-based" storage systems or storage networks that include multiple storage apparatus or devices. The term "machine-readable medium" shall accordingly be taken to include, but not be limited to, one or more data repositories in the form of a solid-state memory (e.g., flash memory), an optical medium, a magnetic medium, other non-volatile memory (e.g., Erasable Programmable Read-Only Memory (EPROM)), or any suitable combination thereof. The term "machine-readable medium" specifically excludes non-statutory signals per se.

[0082] The I/O components **1150** include a wide variety of components to receive input, provide output, produce output, transmit information, exchange information, capture measurements, and so on. In general, it will be appreciated that the I/O components **1150** can include many other components that are not shown in FIG. **11**. The I/O components **1150** are grouped according to functionality merely for simplifying the following discussion, and the grouping is in no way limiting. In various example embodiments, the I/O components **1150** include output components **1152** and input components **1154**. The output components **1152** include visual components (e.g., a display such as a plasma display panel (PDP), a light emitting diode (LED) display, a liquid crystal display (LCD), a projector, or a cathode ray tube (CRT)), acoustic components (e.g., speakers), haptic components (e.g., a vibratory motor), other signal generators, and so forth. The input components **1154** include alphanumeric input components (e.g., a keyboard, a touch screen configured to receive alphanumeric input, a photo-optical keyboard, or other alphanumeric input components), point based input components (e.g., a mouse, a touchpad, a trackball, a joystick, a motion sensor, or other pointing instruments), tactile input components (e.g., a physical button, a touch screen that provides location and force of touches or touch gestures, or other tactile input components), audio input components (e.g., a microphone), and the like.

[0083] In some further example embodiments, the I/O components **1150** include biometric components **1156**, motion components **1158**, environmental components **1160**, or position components **1162**, among a wide array of other components. For example, the biometric components **1156** include components to detect expressions (e.g., hand expressions, facial expressions, vocal expressions, body gestures, or eye tracking), measure biosignals (e.g., blood pressure, heart rate, body temperature, perspiration, or brain waves), identify a person (e.g., voice identification, retinal identification, facial identification, fingerprint identification, or electroencephalogram based identification), and the like. The motion components **1158** include acceleration sensor components (e.g., an accelerometer), gravitation sensor components, rotation sensor components (e.g., a gyroscope), and so forth. The environmental components **1160** include, for example, illumination sensor components (e.g., a photometer), temperature sensor components (e.g., one or more thermometers that detect ambient temperature), humidity sensor components, pressure sensor components (e.g., a barometer), acoustic sensor components (e.g., one or more microphones that detect background noise), proximity sensor components (e.g., infrared sensors that detect nearby objects), gas sensor components (e.g., machine olfaction detection sensors, gas detection sensors to detect concentrations of hazardous gases for safety or to measure pollutants in the atmosphere), or other components that may provide indications, measurements, or signals corresponding to a surrounding physical environment. The position components **1162** include location sensor components (e.g., a Global Positioning System (GPS) receiver component), altitude sensor components (e.g., altimeters or barometers that detect air pressure from which altitude may be derived), orientation sensor components (e.g., magnetometers), and the like.

[0084] Communication can be implemented using a wide variety of technologies. The I/O components **1150** may include communication components **1164** operable to couple the machine **1100** to a network **1180** or devices **1170** via a coupling **1182** and a coupling **1172**, respectively. For example, the communication components **1164** include a network interface component or another suitable device to interface with the network **1180**. In further examples, communication components **1164** include wired communication components, wireless communication components, cellular communication components, Near Field Communication (NFC) components, BLUETOOTH® components (e.g., BLUETOOTH® Low Energy), WI-FI® components, and other communication components to provide communication via other modalities. The devices **1170** may be another machine or any of a wide variety of peripheral devices (e.g., a peripheral device coupled via a Universal Serial Bus (USB)).

[0085] Moreover, in some embodiments, the communication components **1164** detect identifiers or include components operable to detect identifiers. For example, the communication components **1164** include Radio Frequency Identification (RFID) tag reader components, NFC smart tag detection components, optical reader components (e.g., an optical sensor to detect one-dimensional bar codes such as a Universal Product Code (UPC) bar code, multi-dimensional bar codes such as a Quick Response (QR) code, Aztec Code, Data Matrix, Dataglyph, MaxiCode, PDF417, Ultra Code. Uniform Commercial Code Reduced Space Symbology (UCC RSS)-2D bar codes, and other optical codes), acoustic detection components (e.g., microphones to identify tagged audio signals), or any suitable combination thereof. In addition, a variety of information can be derived via the communication components **1164**, such as location via Internet Protocol (IP) geolocation, location via WI-FI® signal triangulation, location via detecting a BLUETOOTH® or NFC beacon signal that may indicate a particular location, and so forth.

Transmission Medium

[0086] In various example embodiments, one or more portions of the network **1180** can be an ad hoc network, an intranet, an extranet, a virtual private network (VPN), a local area network (LAN), a wireless LAN (WLAN), a wide area network (WAN), a wireless WAN (WWAN), a metropolitan area network (MAN), the Internet, a portion of the Internet, a portion of the Public Switched Telephone Network (PSTN), a plain old telephone service (POTS) network, a cellular telephone network, a wireless network, a WI-FI® network, another type of network, or a combination of two or more such networks. For example, the network **1180** or a portion of the network **1180** may include a wireless or cellular network, and the coupling **1182** may be a Code Division Multiple Access (CDMA) connection, a Global System for Mobile communications (GSM) connection, or another type of cellular or wireless coupling. In this example, the coupling **1182** can implement any of a variety of types of data transfer technology, such as Single Carrier Radio Transmission Technology (1×RTT), Evolution-Data Optimized (EVDO) technology, General Packet Radio Service (GPRS) technology, Enhanced Data rates for GSM Evolution (EDGE) technology, third Generation Partnership Project (3GPP) including 3G, fourth generation wireless (4G) networks, Universal Mobile Telecommunications System (UMTS), High Speed Packet Access (HSPA), Worldwide Interoperability for Microwave Access (WiMAX), Long Term Evolution (LTE) standard, others defined by various standard-setting organizations, other long range protocols, or other data transfer technology.

[0087] In example embodiments, the instructions **1116** are transmitted or received over the network **1180** using a transmission medium via a network interface device (e.g., a network interface component included in the communication components **1164**) and utilizing any one of a number of well-known transfer protocols (e.g., Hypertext Transfer Protocol (HTTP)). Similarly, in other example embodiments, the instructions **1116** are transmitted or received using a transmission medium via the coupling **1172** (e.g., a peer-to-peer coupling) to the devices **1170**. The term "transmission medium" shall be taken to include any intangible medium that is capable of storing, encoding, or carrying the instructions **1116** for execution by the machine **1100**, and includes digital or analog communications signals or other intangible media to facilitate communication of such software.

[0088] Furthermore, the machine-readable medium **1138** is non-transitory (in other words, not having any transitory signals) in that it does not embody a propagating signal. However, labeling the machine-readable medium **1138** "non-transitory" should not be construed to mean that the medium is incapable of movement; the medium should be considered as being transportable from one physical location to another. Additionally, since the machine-readable

medium **1138** is tangible, the medium may be considered to be a machine-readable device.

Language

[0089] Throughout this specification, plural instances may implement components, operations, or structures described as a single instance. Although individual operations of one or more methods are illustrated and described as separate operations, one or more of the individual operations may be performed concurrently, and nothing requires that the operations be performed in the order illustrated. Structures and functionality presented as separate components in example configurations may be implemented as a combined structure or component. Similarly, structures and functionality presented as a single component may be implemented as separate components. These and other variations, modifications, additions, and improvements fall within the scope of the subject matter herein.

[0090] Although an overview of the inventive subject matter has been described with reference to specific example embodiments, various modifications and changes may be made to these embodiments without departing from the broader scope of embodiments of the present disclosure. Such embodiments of the inventive subject matter may be referred to herein, individually or collectively, by the term "invention" merely for convenience and without intending to voluntarily limit the scope of this application to any single disclosure or inventive concept if more than one is, in fact, disclosed.

[0091] The embodiments illustrated herein are described in sufficient detail to enable those skilled in the art to practice the teachings disclosed. Other embodiments may be used and derived therefrom, such that structural and logical substitutions and changes may be made without departing from the scope of this disclosure. The Detailed Description, therefore, is not to be taken in a limiting sense, and the scope of various embodiments is defined only by the appended claims, along with the full range of equivalents to which such claims are entitled.

[0092] As used herein, the term "or" may be construed in either an inclusive or exclusive sense. Moreover, plural instances may be provided for resources, operations, or structures described herein as a single instance. Additionally, boundaries between various resources, operations, modules, engines, and data stores are somewhat arbitrary, and particular operations are illustrated in a context of specific illustrative configurations. Other allocations of functionality are envisioned and may fall within a scope of various embodiments of the present disclosure. In general, structures and functionality presented as separate resources in the example configurations may be implemented as a combined structure or resource. Similarly, structures and functionality presented as a single resource may be implemented as separate resources. These and other variations, modifications, additions, and improvements fall within a scope of embodiments of the present disclosure as represented by the appended claims. The specification and drawings are, accordingly, to be regarded in an illustrative rather than a restrictive sense.

1. A method comprising:

receiving, at a server-computer, a message activity communication from a client device, the message activity communication including data about a message processed by the client device;

accessing, by one or more processors, a message indicator from a first data structure, the message indicator including a message activity score that is based, at least in part, on past messages sent from and received by the client device;

adjusting the message activity score based on the message activity communication;

accessing a parameter indicator from a second data structure, the parameter indicator including a first threshold activity score and an achievement pictograph;

matching the message indicator to the parameter indicator;

determining the message activity score transgresses the first threshold activity score;

responsive to determining the message activity score transgresses the threshold activity score, causing display of the achievement pictograph within a user interface.

2. The method of claim **1**, wherein messages include ephemeral messages associated with a message deletion trigger.

3. The method of claim **1**, wherein message include a communication between the client device and the server-computer.

4. The method of claim **1**, further comprising:

responsive to display of the achievement pictograph within the user interface, causing display of an achievement notification within the user interface.

5. The method of claim **1**, wherein the client device is a first client device and wherein the message activity score is further based on message activity between the first client device and a second client device.

6. The method of claim **1**, wherein the message activity score is further based on a time frame in which the message activity occurs on the client device.

7. The method of claim **1**, further comprising:

detecting that an achievement pictograph is displayed within the user interface;

determining the message activity score transgresses a second threshold activity score; and

responsive to determining the massage activity score transgresses the second threshold activity score, removing the display of the achievement pictograph within the user interface.

8. The method of claim **1**, wherein the client device is a first client device and wherein a second threshold is transgressed based on message activity occurring between the first client device and a second client device, the message activity occurring within a designated time frame.

9. The method of claim **7**, further comprising:

detecting that the designated time frame has a designated time quantity remaining within the time frame;

determining that the second threshold will be transgressed based on the message activity occurring between the first client device and the second client device; and

responsive to detecting that the time limit has the designated time quantity remaining and the second threshold will be transgressed, causing display of a time limit notification within the user interface.

10. A system comprising:

one or more processors of a machine; and

a memory storing instructions that, when executed by the one or more processors, causes the machine to perform operations comprising:

receiving, at a server-computer, a message activity communication from a client device, the message activity communication including data about a message processed by the client device;

accessing, by one or more processors, a message indicator from a first data structure, the message indicator including a message activity score that is based, at least in part, on past messages sent from and received by the client device;

adjusting the message activity score based on the message activity communication;

accessing a parameter indicator from a second data structure, the parameter indicator including a first threshold activity score and an achievement pictograph;

matching the message indicator to the parameter indicator;

determining the message activity score transgresses the first threshold activity score;

responsive to determining the message activity score transgresses the threshold activity score, causing display of the achievement pictograph within a user interface.

11. The system of claim **10**, wherein messages include ephemeral messages associated with a message deletion trigger.

12. The system of claim **10**, wherein message include a communication between the client device and the server-computer.

13. The system of claim **10**, wherein operations further comprise:

responsive to display of the achievement pictograph within the user interface, causing display of an achievement notification within the user interface.

14. The system of claim **10**, wherein the client device is a first client device and wherein the message activity score is further based on message activity between the first client device and a second client device.

15. The system of claim **10**, wherein the message activity score is further based on a time frame in which the message activity occurs on the client device.

16. The system of claim **10**, wherein operations further comprise:

detecting that an achievement pictograph is displayed within the user interface;

determining the message activity score transgresses a second threshold activity score; and

responsive to determining the massage activity score transgresses the second threshold activity score, removing the display of the achievement pictograph within the user interface.

17. The system of claim **1**, wherein the client device is a first client device and wherein a second threshold is transgressed based on message activity occurring between the first client device and a second client device, the message activity occurring within a designated time frame.

18. The system of claim **17**, wherein operations further comprise:

detecting that the designated time frame has a designated time quantity remaining within the time frame;

determining that the second threshold will be transgressed based on the message activity occurring between the first client device and the second client device; and

responsive to detecting that the time limit has the designated time quantity remaining and the second threshold will be transgressed, causing display of a time limit notification within the user interface.

19. A non-transitory machine-readable storage medium comprising instructions that, when executed by one or more processors of a machine, cause the machine to perform operations comprising:

receiving, at a server-computer, a message activity communication from a client device, the message activity communication including data about a message processed by the client device;

accessing, by one or more processors, a message indicator from a first data structure, the message indicator including a message activity score that is based, at least in part, on past messages sent from and received by the client device;

adjusting the message activity score based on the message activity communication;

accessing a parameter indicator from a second data structure, the parameter indicator including a first threshold activity score and an achievement pictograph;

matching the message indicator to the parameter indicator;

determining the message activity score transgresses the first threshold activity score;

responsive to determining the message activity score transgresses the threshold activity score, causing display of the achievement pictograph within a user interface.

20. The non-transitory machine-readable storage medium of claim **19**, wherein operations further comprise:

detecting that an achievement pictograph is displayed within the user interface;

determining the message activity score transgresses a second threshold activity score; and

responsive to determining the massage activity score transgresses the second threshold activity score, removing the display of the achievement pictograph within the user interface.

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